STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-6011	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
47146.1.1		PE
47146.2.1		ROW
47146.2.2		UTIL RELO.
47146.3.1		CONST

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

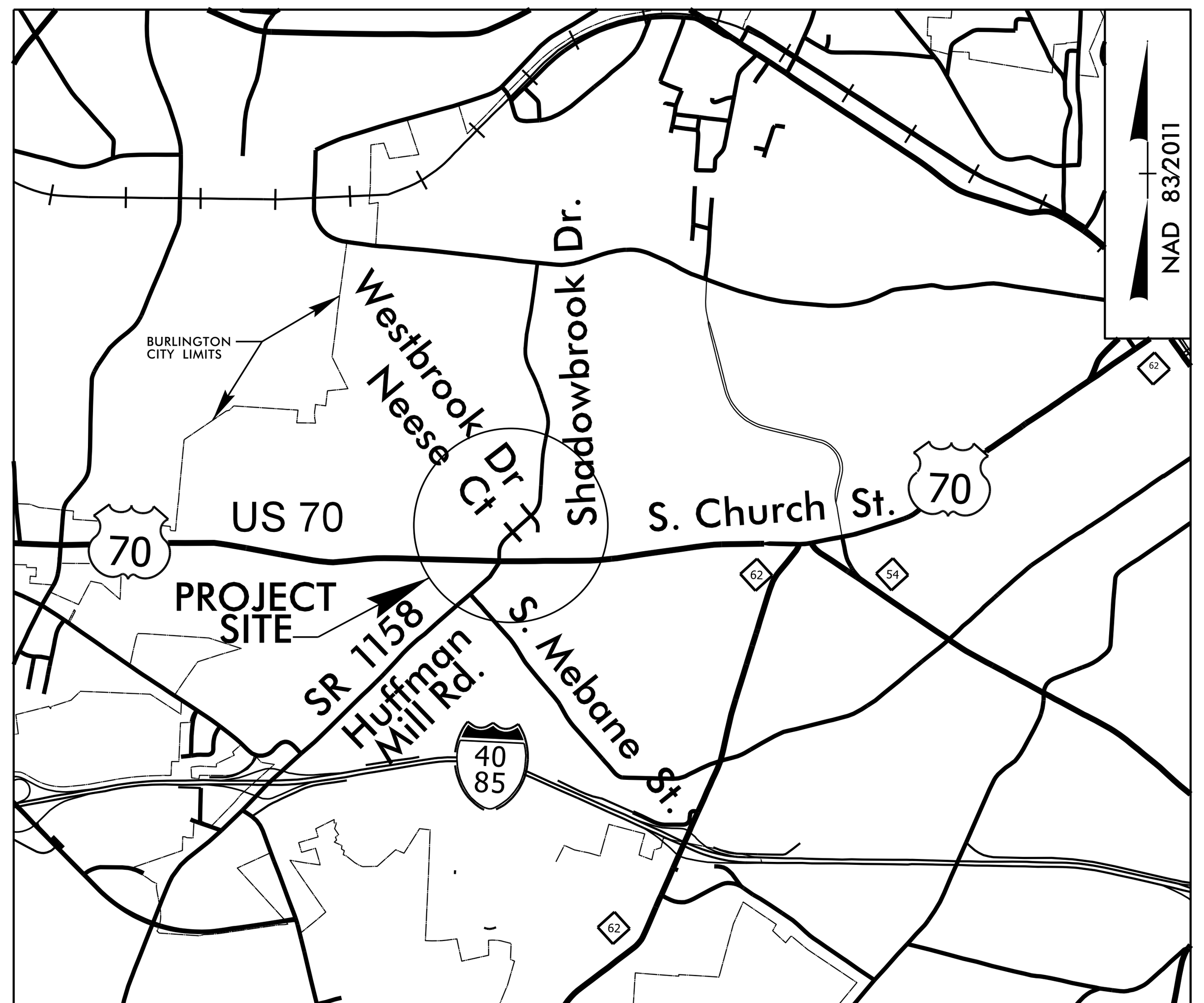
ALAMANCE COUNTY

LOCATION: US 70 (SOUTH CHURCH ST) AT SR 1158 (HUFFMAN MILL RD) IN BURLINGTON

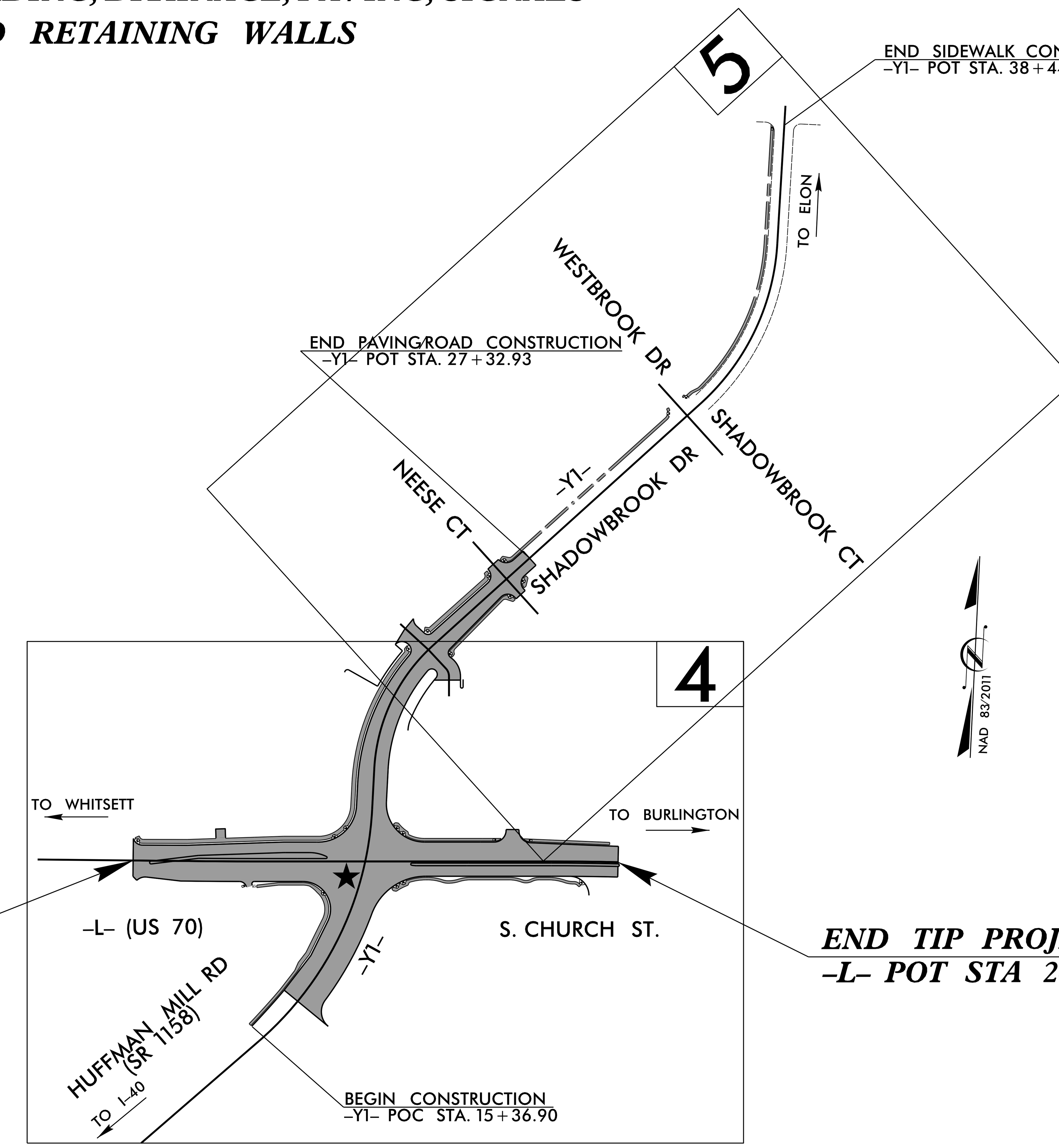
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS AND RETAINING WALLS

TIP PROJECT: U-6011

CONTRACT: C205066



VICINITY MAP



BEGIN TIP PROJECT U-6011
-L- POT STA 10+00.00

END TIP PROJECT U-6011
-L- POT STA 20+15.27

★ DENOTES SIGNAL

THIS PROJECT IS LOCATED WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF BURLINGTON.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2025 = 24,800
ADT 2039 = 26,200
K = 13 %
D = 50 %
T = 3 % *
V = 50 MPH
* TTST = 2% + DUALS 1%
FUNC CLASS = URBAN ARTERIAL

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT U-6011	= 0.192 MILES
TOTAL LENGTH OF TIP PROJECT U-6011	= 0.192 MILES

Prepared In the Office of:

PLANS PREPARED BY PARSONS

SUNGATE DESIGN GROUP, P.A.

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
OCTOBER 12, 2021

LETTING DATE:
APRIL 15, 2025

AYMAN I. ALQUDWAH, PE
PROJECT ENGINEER

DAVID GARRETT
PROJECT DESIGN ENGINEER

BRIAN KETNER, PE
NCDOT CONTACT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 026971 ENGINEER JOSHUA G. DALTON 1/23/2025

Signed by: Josh Dalton
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028387 ENGINEER AYMAN I. ALQUDWAH 1/23/2025

DocuSigned by: Ayman Alqudwah
SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Docusign Envelope ID: 8E33D0B2-74F2-46A3-AFCA-07B68E4B9E6C

PLANS PREPARED BY: PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

ROADWAY DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INDEX OF SHEETS

GENERAL NOTES:

2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE WATER - CITY OF BURLINGTON (MATT BECKWITH), SEWER - CITY OF BURLINGTON (MATT BECKWITH), GAS - PIEDMONT NATURAL GAS (KENNETH STATE),POWER - DUKE ENERGY (JAMES CARLTON), TELEPHONE - LUMEN (TAYLOR HARMON), TELEPHONE - AT&T (WILL PACE), TELEPHONE - VERIZON (KEITH POORE).

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

CURB RAMPS

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.06.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

EFF. 01-16-2024
REV.

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transporttion - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.25	Anchorage for Frames - Brick/Concrete/Precast
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.04	Street Turnout
848.06	Curb Ramp
852.01	Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation

8/17/99
13-JAN-2025 16:11
J:\U-6011\Roadway\Proj\U-6011_RDY_PSH_01A.dgn
$$$$USERNAME$$$$

9/10/2021

PROJECT REFERENCE NO.	SHEET NO.
U-6011	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP) — EIP
- Computed Property Corner
- Existing Concrete Monument (ECM) — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil — S
- Potential Contamination Area: Soil — S
- Known Contamination Area: Water — W
- Potential Contamination Area: Water — W
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Secondary Horiz and Vert Control Point
- Vertical Benchmark
- Existing Right of Way Monument
- Proposed Right of Way Monument (Rebar and Cap)
- Proposed Right of Way Monument (Concrete)
- Existing Permanent Easement Monument
- Proposed Permanent Easement Monument (Rebar and Cap)
- Existing C/A Monument
- Proposed C/A Monument (Rebar and Cap)
- Proposed C/A Monument (Concrete)
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Existing Control of Access Line — CA
- Proposed Control of Access Line — CA
- Proposed ROW and CA Line — RW CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage/Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge

- Woods Line
- Orchard
- Vineyard — Vlneyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

** SUE – Subsurface Utility Engineering*
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H–Frame Pole
- U/G Power Line Test Hole (SUE – LOS A)*
- U/G Power Line (SUE – LOS B)* — P
- U/G Power Line (SUE – LOS C)* — P
- U/G Power Line (SUE – LOS D)* — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Test Hole (SUE – LOS A)*
- U/G Telephone Cable (SUE – LOS B)* — T
- U/G Telephone Cable (SUE – LOS C)* — T
- U/G Telephone Cable (SUE – LOS D)* — T
- U/G Telephone Conduit (SUE – LOS B)* — TC
- U/G Telephone Conduit (SUE – LOS C)* — TC
- U/G Telephone Conduit (SUE – LOS D)* — TC
- U/G Fiber Optics Cable (SUE – LOS B)* — T FO
- U/G Fiber Optics Cable (SUE – LOS C)* — T FO
- U/G Fiber Optics Cable (SUE – LOS D)* — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE – LOS A)*
- U/G Water Line (SUE – LOS B)* — W
- U/G Water Line (SUE – LOS C)* — W
- U/G Water Line (SUE – LOS D)* — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Test Hole (SUE – LOS A)*
- U/G TV Cable (SUE – LOS B)* — TV
- U/G TV Cable (SUE – LOS C)* — TV
- U/G TV Cable (SUE – LOS D)* — TV
- U/G Fiber Optic Cable (SUE – LOS B)* — TV FO
- U/G Fiber Optic Cable (SUE – LOS C)* — TV FO
- U/G Fiber Optic Cable (SUE – LOS D)* — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line Test Hole (SUE – LOS A)*
- U/G Gas Line (SUE – LOS B)* — G
- U/G Gas Line (SUE – LOS C)* — G
- U/G Gas Line (SUE – LOS D)* — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Force Main Line Test Hole (SUE – LOS A)*
- SS Force Main Line (SUE – LOS B)* — FSS
- SS Force Main Line (SUE – LOS C)* — FSS
- SS Force Main Line (SUE – LOS D)* — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line (SUE – LOS B)* — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PLANS PREPARED BY :
PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

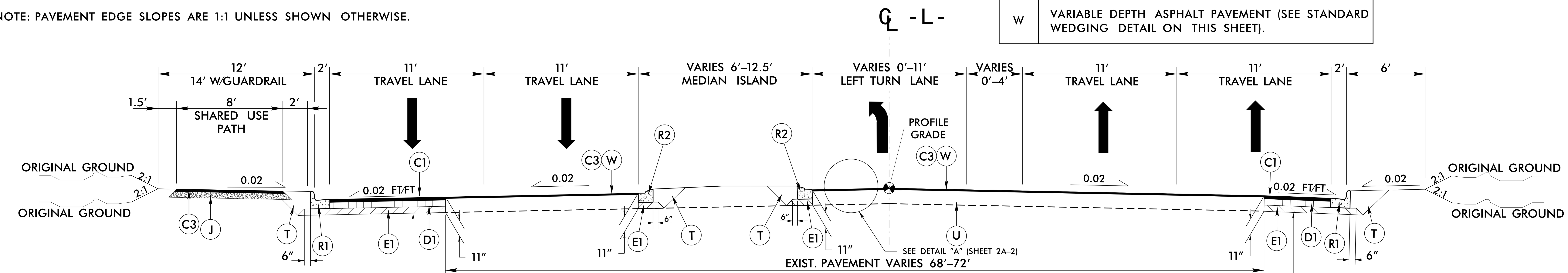
PROJECT REFERENCE NO.	SHEET NO.
U-6011	2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
SEAL 028387 AYMAN I. ALQOUAAH 2025	SEAL 038176 SHIHAI ZHANG 2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

FINAL PAVEMENT SCHEDULE

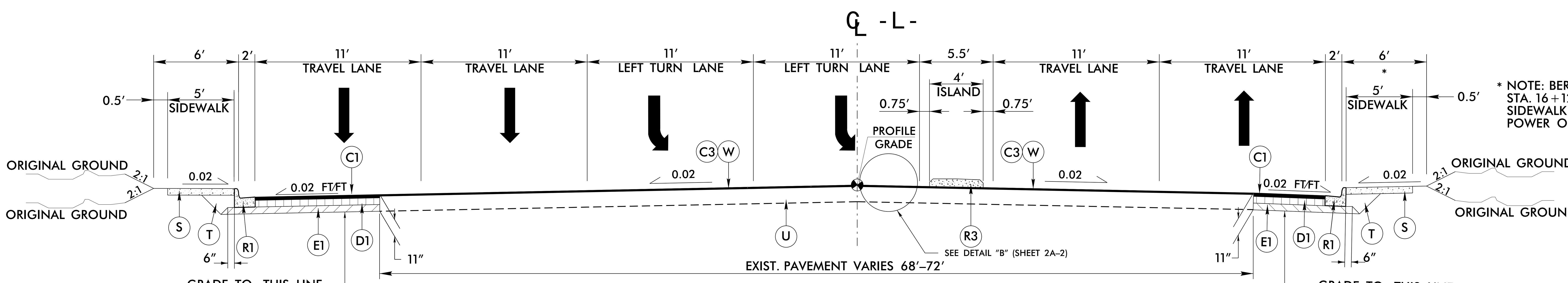
CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R3	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1½" IN DEPTH OR GREATER THAN 2" IN DEPTH.	E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	S	4" CONCRETE SIDEWALK
C3	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	J	PROP. 6" AGGREGATE BASE COURSE	T	EARTH MATERIAL
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R1	2'-6" CURB AND GUTTER	U	EXISTING PAVEMENT
D2	PROP. VAR. DEPTH OF ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 114 LBS PER SQ YD PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	R2	1'-6" CURB AND GUTTER	V	INCIDENTAL MILLING
				W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL ON THIS SHEET).

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 1

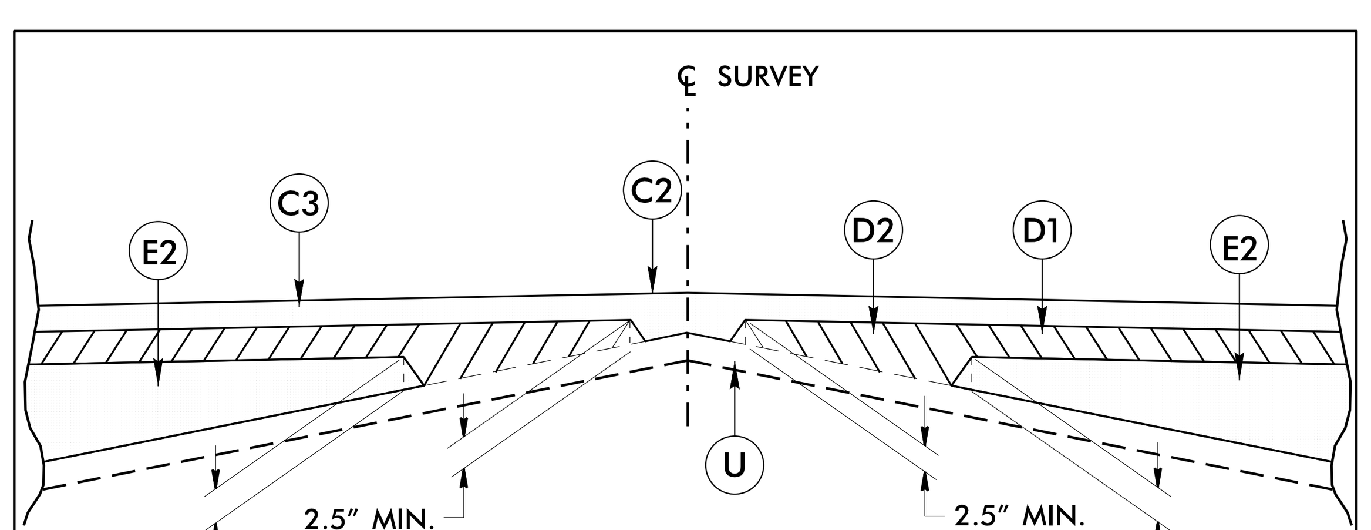
STA. 10+00.00 -L- TO STA. 13+75.54 -L-



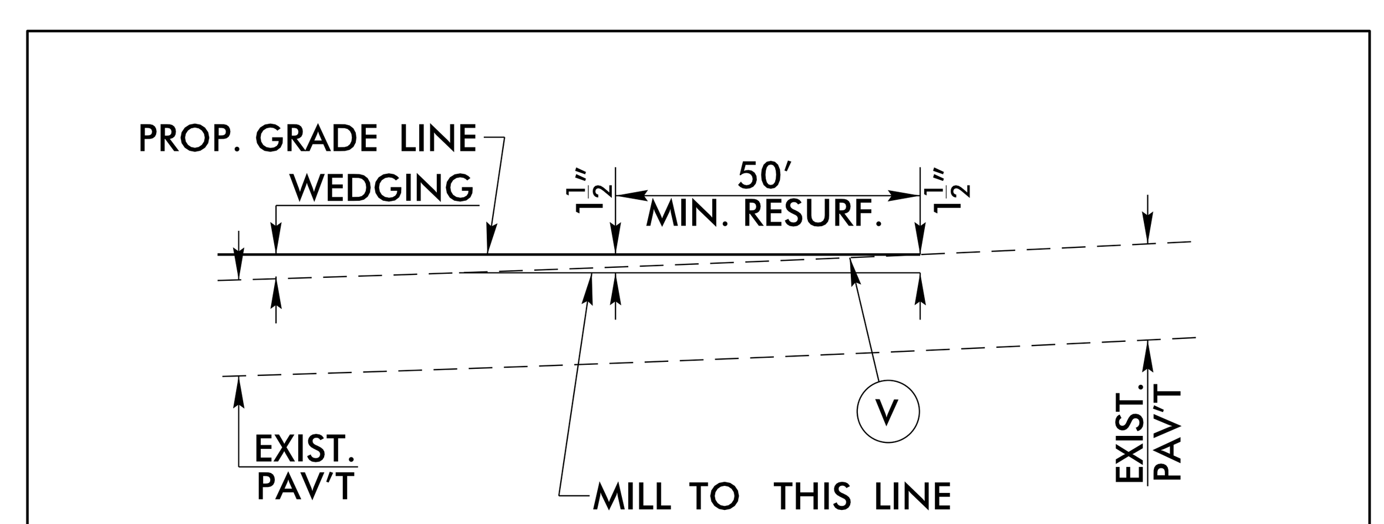
* NOTE: BERM WIDTH VARIES FROM STA. 16+12 +/- TO 19+45 +/- -L- RT. SIDEWALK MEANDERS TO AVOID EXISTING POWER OR LIGHT POLES. (SEE PLANS & X-SECTIONS)

TYPICAL SECTION NO. 2

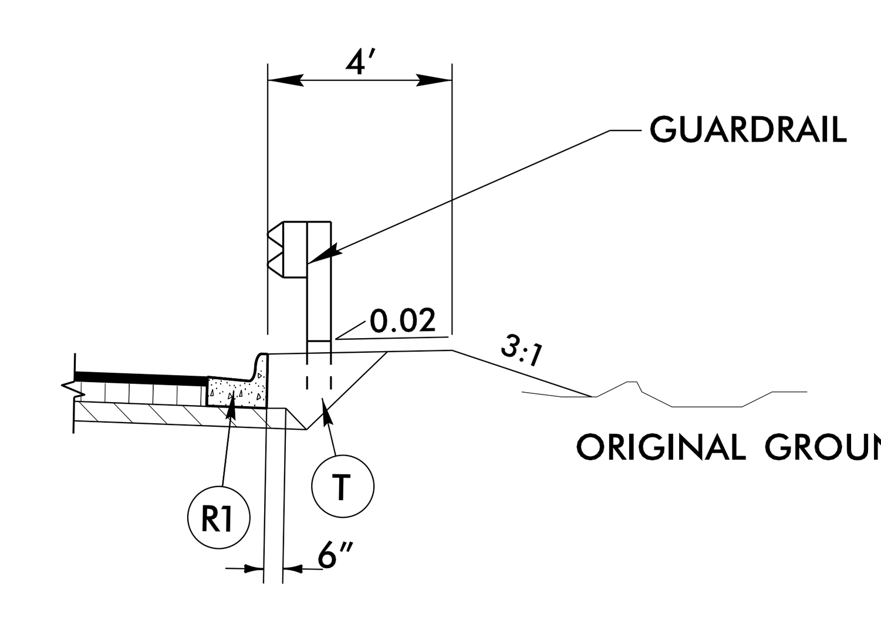
STA. 15+91.00 -L- TO STA. 20+15.27 -L-



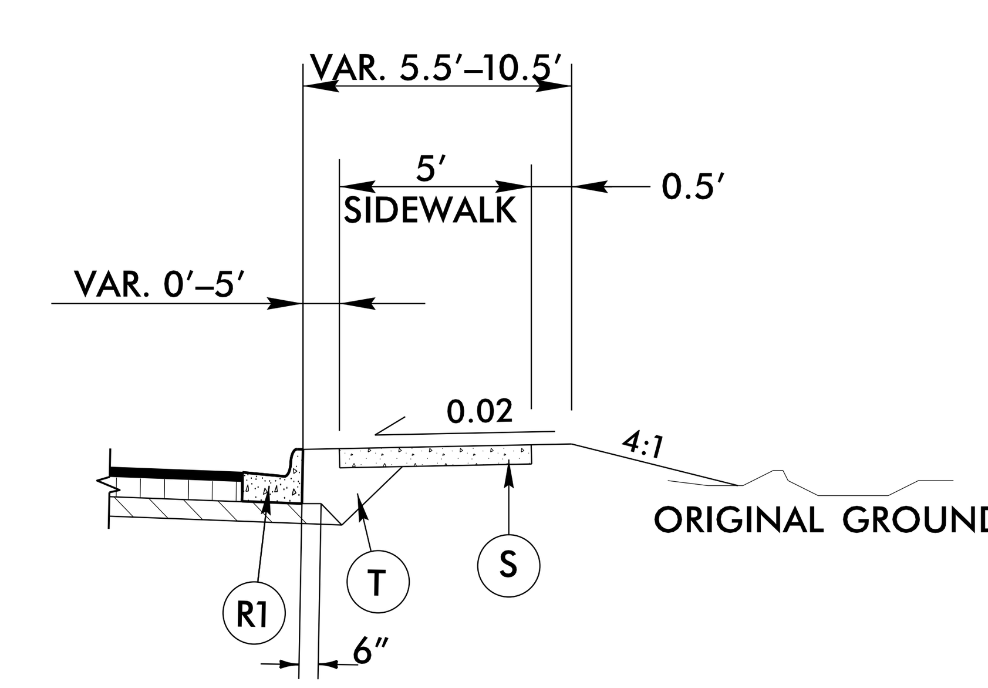
DETAIL SHOWING METHOD OF WEDGING



DETAIL OF INCIDENTAL MILLING



USE ALTERNATE BERM WIDTH
STA. 10+23.99 -L- TO STA. 12+05.24 -L- (RT)



USE ALTERNATE BERM WIDTH
STA. 12+59.06 -L- TO STA. 13+04.36 -L- (RT)
(SEE PLANS)

FINAL PAVEMENT SCHEDULE

6/2/99

CODE	DESCRIPTION
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN $1\frac{1}{2}$" IN DEPTH OR GREATER THAN 2" IN DEPTH.
C3	PROP. APPROX. $1\frac{1}{2}$" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH OF ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C AT AN AVERAGE RATE OF 114 LBS PER SQ YD PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN $2\frac{1}{2}$" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 4" IN DEPTH OR GREATER THAN $5\frac{1}{2}$" IN DEPTH.
J	6" PROP. AGGREGATE BASE COURSE
R1	2'–6" CURB AND GUTTER
R2	1'–6" CURB AND GUTTER
R3	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL ON SHEET 2A–1).

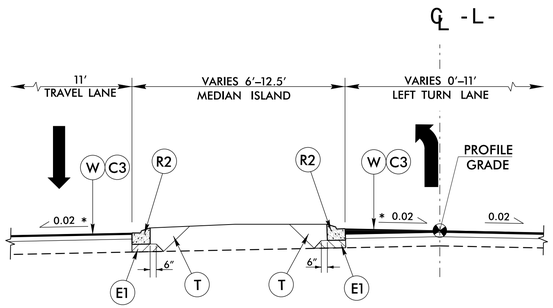
PLANS PREPARED BY :
PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

PROJECT REFERENCE NO.	SHEET NO.
U-6011	2A-2

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 026387 ENGINEER TAMAN L. ALQUDMANI
DocuSigned by: Taman Alqudmani 13/JAN/2025

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 038176 ENGINEER CHUTAI ZHANG
DocuSigned by: Chutai Zhang 13/JAN/2025

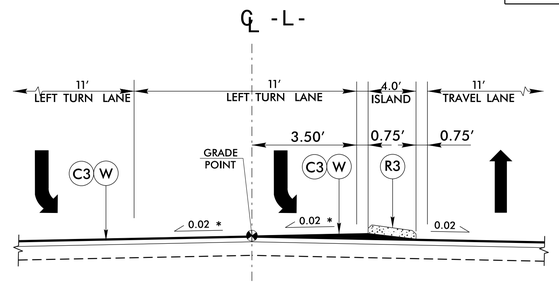
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



* OR AS SHOWN ON PLANS

DETAIL "A"

–L– STA. 10+90.70 TO STA. 13+69.29 LT
–L– STA. 13+69.29 LT TO STA. 15+93.76 RT (TRANSITION)



* OR AS SHOWN ON PLANS

DETAIL "B"

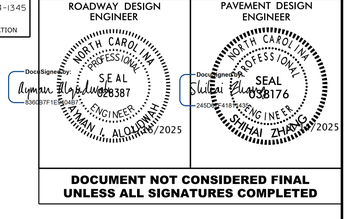
–L– STA. 15+93.76 TO STA. 20+15.27 RT

USE ALTERNATE BERM WIDTH
STA. 15+36.90 –Y1– TO STA. 16+92.65 –Y1– (LT)
STA. 26+85.51 –Y1– TO STA. 27+07.67 –Y1– (LT)

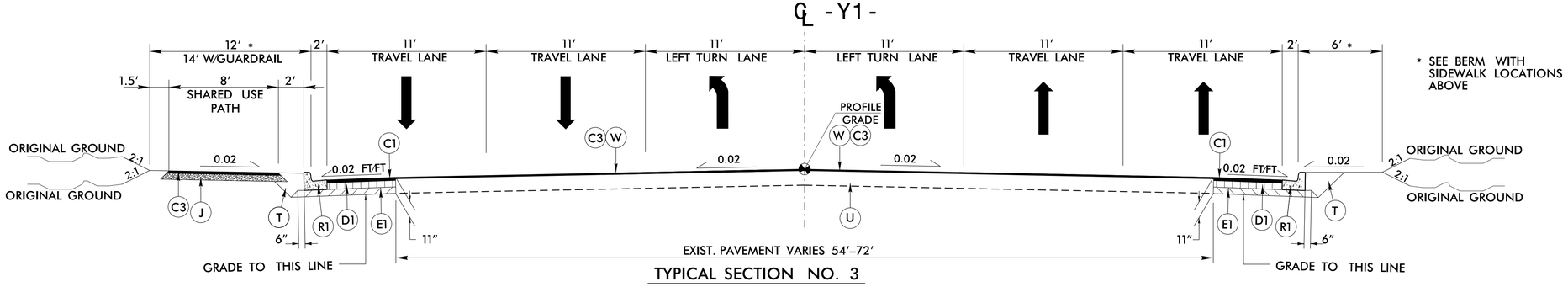
USE ALTERNATE BERM WIDTH
STA. 27+07.67 –Y1– TO STA. 38+44.52 –Y1– (LT)

NOTE:
SEE PLAN SHEET 5 FOR LIMITS OF PROPOSED SIDEWALK OUTSIDE OF CONSTRUCTION LIMITS.

USE ALTERNATE BERM WIDTH
STA. 17+14.17 –Y1– TO STA. 18+00.00 –Y1– (RT)



USE ALTERNATE BERM WITH SIDEWALK
STA. 24+74.13 –Y1– TO STA. 27+02.68 –Y1– (RT)



* SEE BERM WITH SIDEWALK LOCATIONS ABOVE

TYPICAL SECTION NO. 3

STA. 16+43.87 –Y1– TO STA. 27+32.93 –Y1–

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-6011	2B-1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028387 ENGINEER 12/27/2024

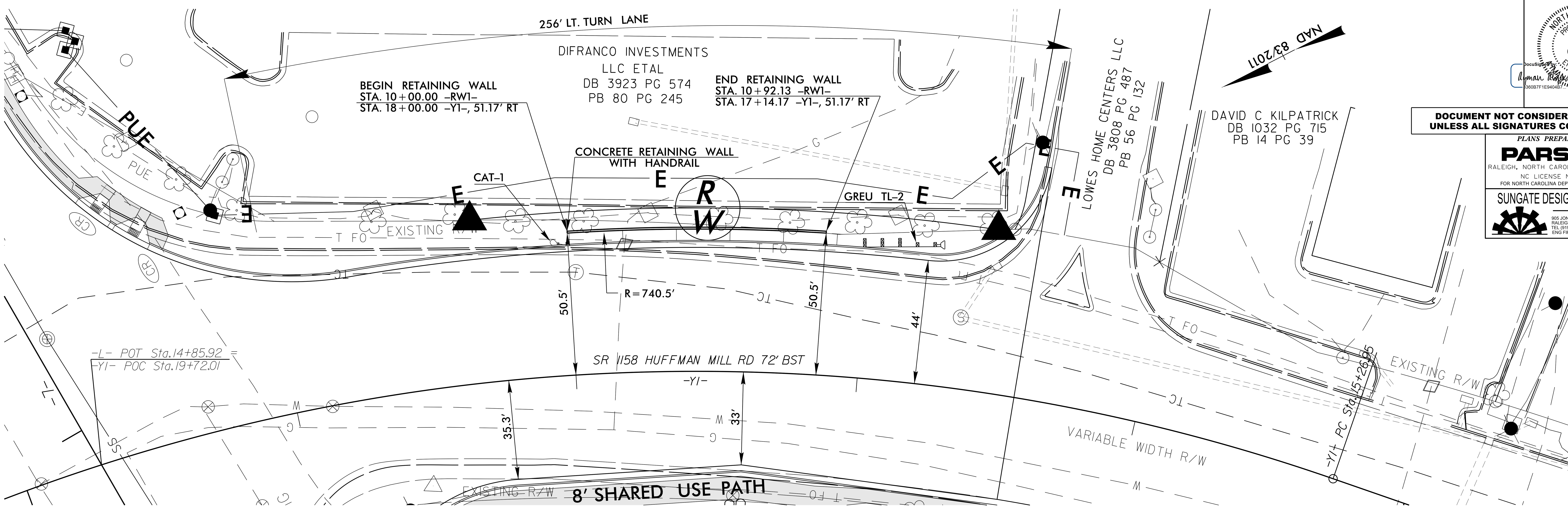
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED BY :

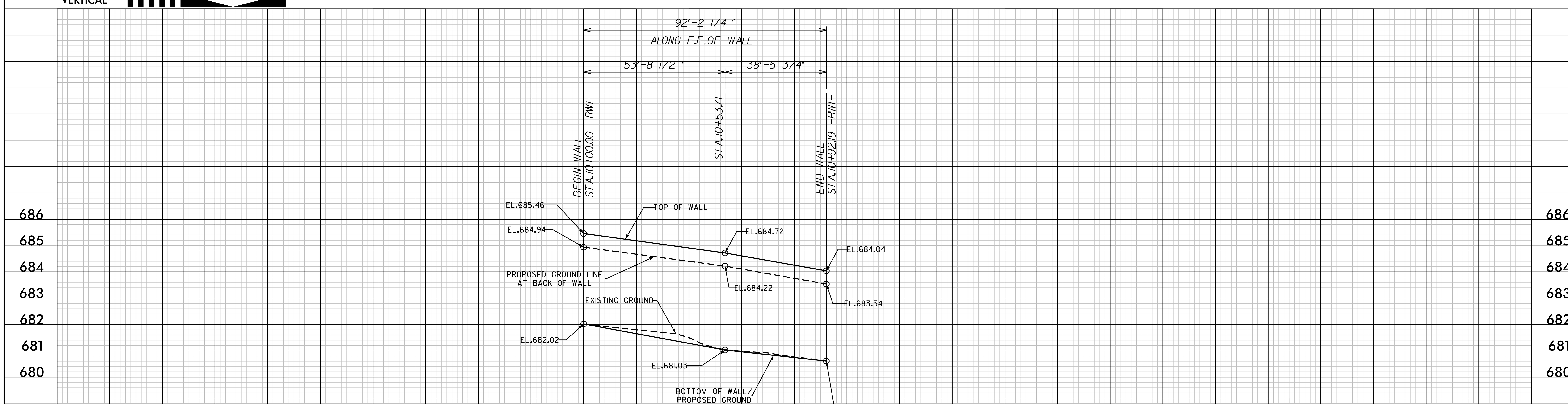
PARSONS

RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

SUNGATE DESIGN GROUP, P.A.



PLAN – RETAINING WALL



ELEVATION – RETAINING WALL

(EXPOSED FRONT FACE)

NOTE:
SEE SHEET 4 FOR ROADWAY PLAN
SEE SHEET 2C-1 FOR DETAIL OF CIP GRAVITY RETAINING WALL
SEE SHEET 2C-2 FOR RETAINING WALL HANDRAIL DETAIL

10

20-NOV-2024 14:38
J:\U-6011\Roadway\Proj\U-6011_Rdy_psh_02B-1.dgn

GEOTECHNICAL ENGINEER

SIGNATURE DATE

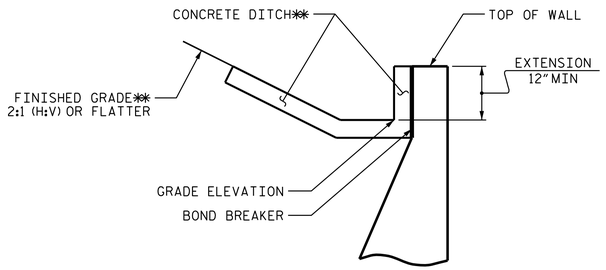
ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028387 ENGINEER AYMAN L. ALQUDWAH

DocuSigned by: Ayman Alqudwah 12/27/2024

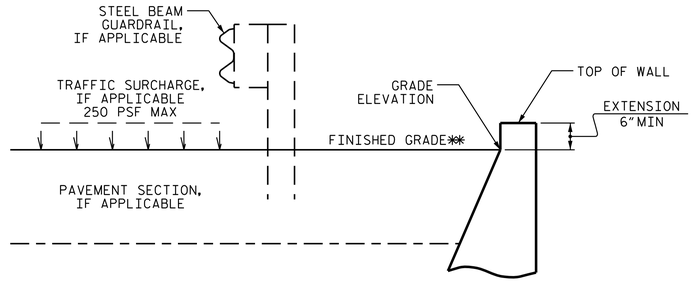
SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



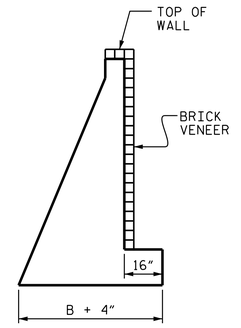
SLOPE CASE

**SEE ROADWAY PLANS FOR CONCRETE DITCH AND FINISHED GRADE DETAILS.



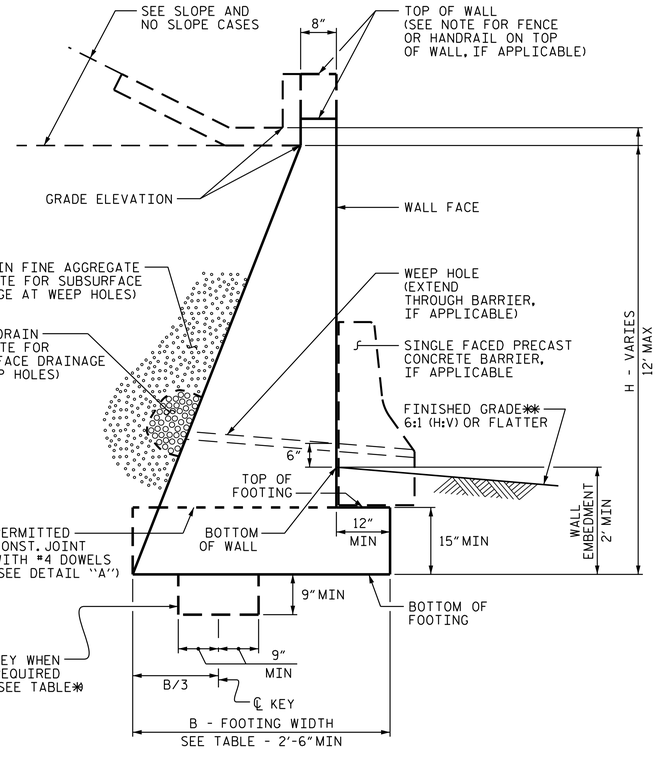
NO SLOPE CASE

**SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.



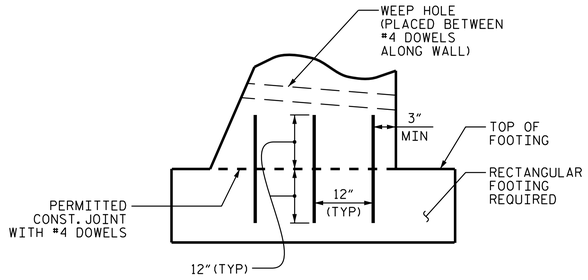
BRICK VENEER DETAIL

(WHEN APPLICABLE)



STANDARD CIP GRAVITY WALL

**SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.



DETAIL "A"

H (FT)	3 - < 6	6 - 9	> 9 - 12
SLOPE CASE	.66	.70*	.75*
NO SLOPE CASE WITH TRAFFIC SURCHARGE	.80	.75*	.70*
NO SLOPE CASE WITHOUT TRAFFIC SURCHARGE	.60	.60	.60

B/H RATIO (B = 2'-6" MIN)

*KEY IS REQUIRED FOR "SLOPE CASE" OR "NO SLOPE CASE WITH TRAFFIC SURCHARGE" WHEN H IS 6' OR GREATER.

NOTES:

FOR STANDARD CIP GRAVITY RETAINING WALLS, SEE SECTION 453 OF THE STANDARD SPECIFICATIONS.

FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.

FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.

FOR FENCES OR HANDRAILS ON TOP OF WALLS, SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.

FOR SUBSURFACE DRAINAGE AT WEEP HOLES, SEE ARTICLE 414-8 OF THE STANDARD SPECIFICATIONS.

STANDARD CIP GRAVITY WALLS ARE BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
- UNIT WEIGHT, γ = 120 PCF
- FRICTION ANGLE, ϕ = 35 DEGREES (GROUNDWATER WITHIN 7' OF BOTTOM OF FOOTING)
- FRICTION ANGLE, ϕ = 30 DEGREES (GROUNDWATER MORE THAN 7' BELOW BOTTOM OF FOOTING)
- COHESION, c = 0 PSF

DO NOT USE STANDARD CIP GRAVITY WALLS IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE OR GROUNDWATER IS ABOVE BOTTOM OF FOOTING.

DO NOT USE STANDARD CIP GRAVITY WALLS WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS BELOW WALLS.

BEFORE BEGINNING STANDARD CIP GRAVITY WALL CONSTRUCTION, SURVEY WALL LOCATIONS AND SUBMIT WALL PROFILE VIEWS (WALL ENVELOPES) FOR REVIEW. FOR WALL ENVELOPES, INCLUDE BOTTOM OF WALL, EXISTING GROUND AND GRADE ELEVATIONS AND OTHER ELEVATIONS AS NEEDED AT INTERVALS OF 25' OR LESS ALONG WALLS. DO NOT START WALL CONSTRUCTION UNTIL WALL ENVELOPES ARE ACCEPTED.

FOR BRICK VENEERS, SUBMIT BRICK SAMPLES FOR APPROVAL BEFORE BEGINNING STANDARD CIP GRAVITY WALL CONSTRUCTION.

DO NOT PLACE CONCRETE FOR FOOTINGS UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

WHEN CONSTRUCTING STANDARD CIP GRAVITY WALLS WITH A CONSTRUCTION JOINT AS SHOWN IN DETAIL "A", PROVIDE A MINIMUM OF 3 EQUALLY SPACED #4 DOWELS AT INTERVALS OF 1'-6" ALONG WALLS.

PROJECT NO.: U-6011

ALAMANCE COUNTY

STATION: 17+14.17 -Y1- to 18+00.00 -Y1-

SHEET 1 OF 1 WALL ID-RW1-

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

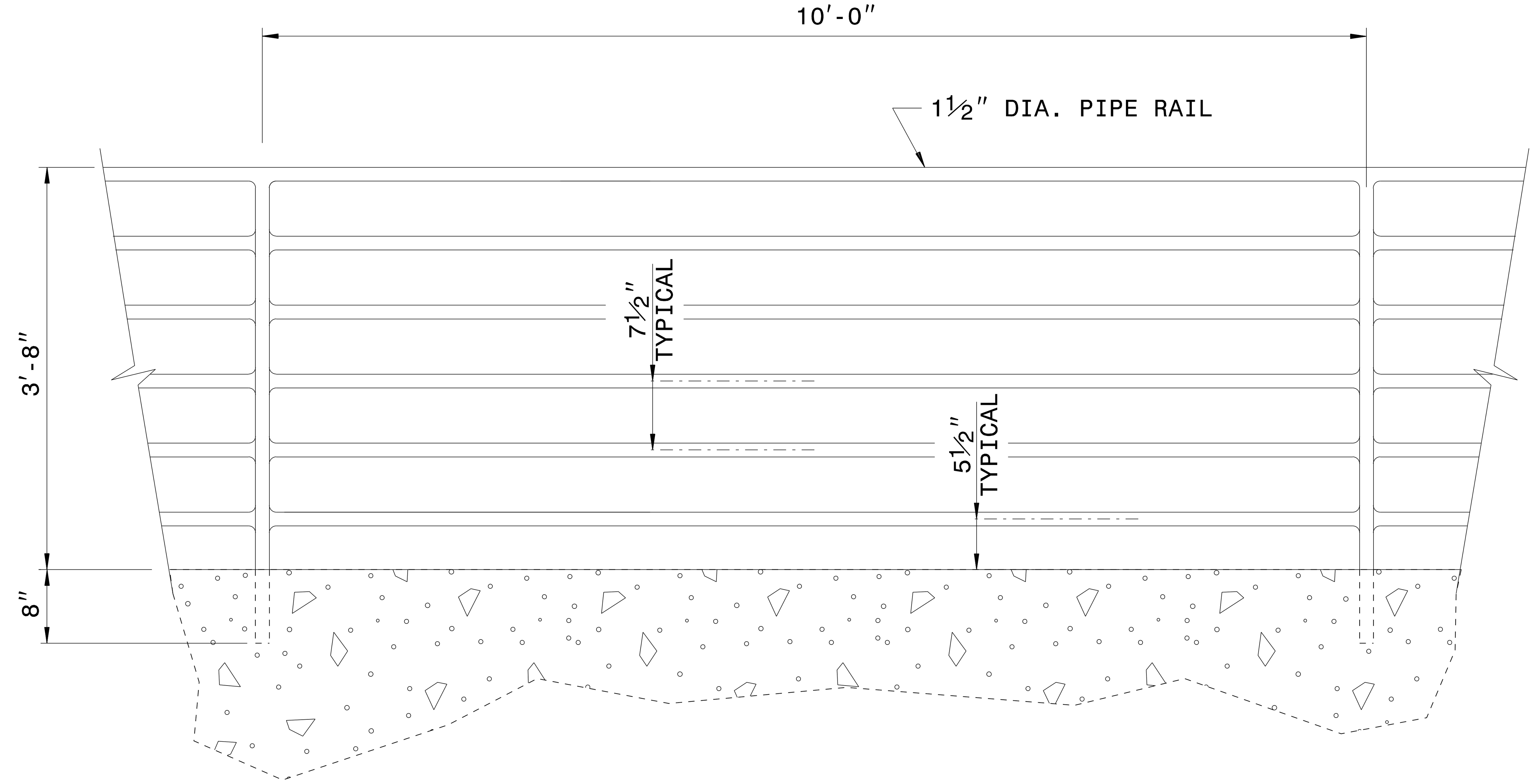
STANDARD DETAIL NO. 453.01

STANDARD CIP GRAVITY RETAINING WALL

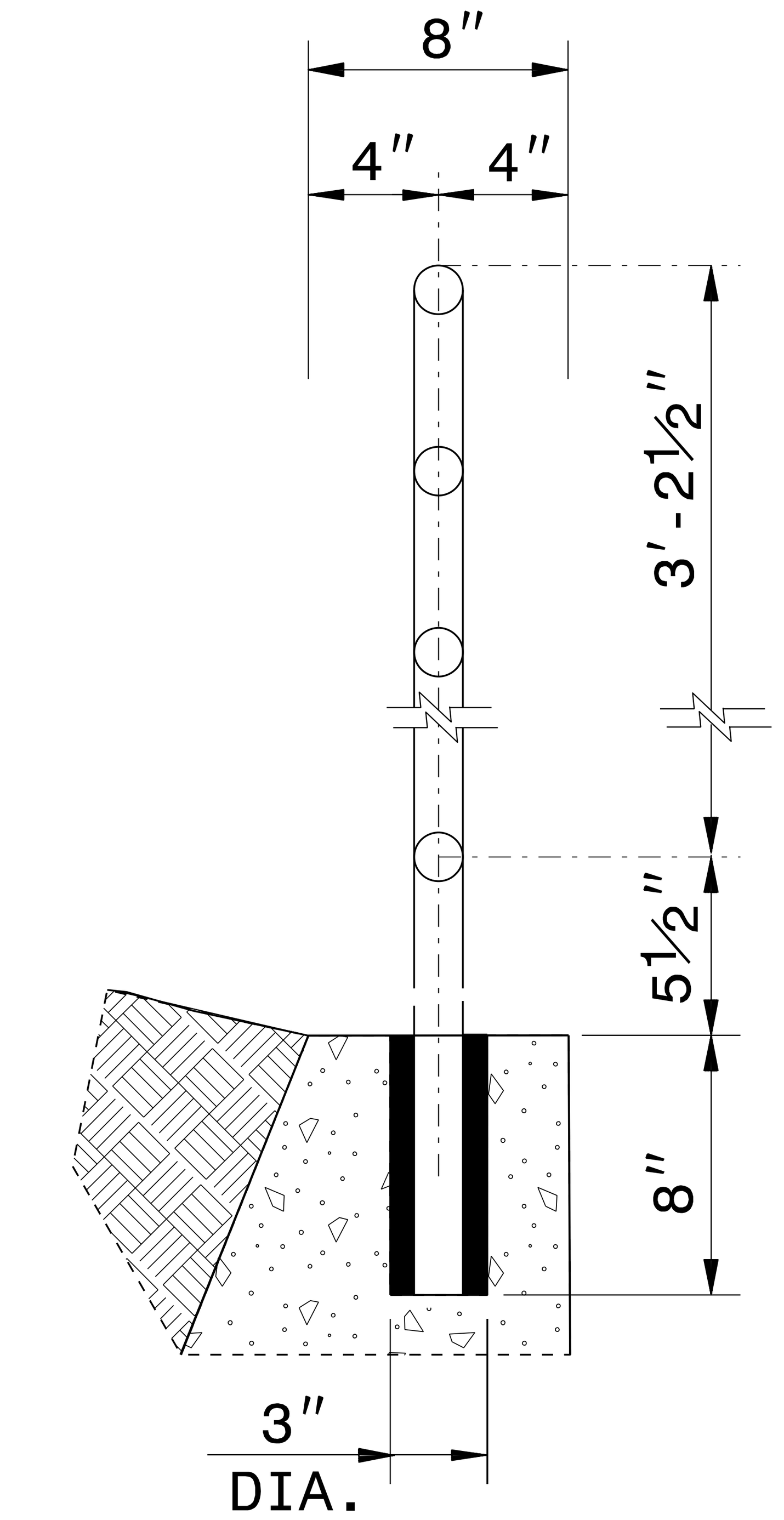
DATE: 10-19-21

SHEET NO. 2C-1

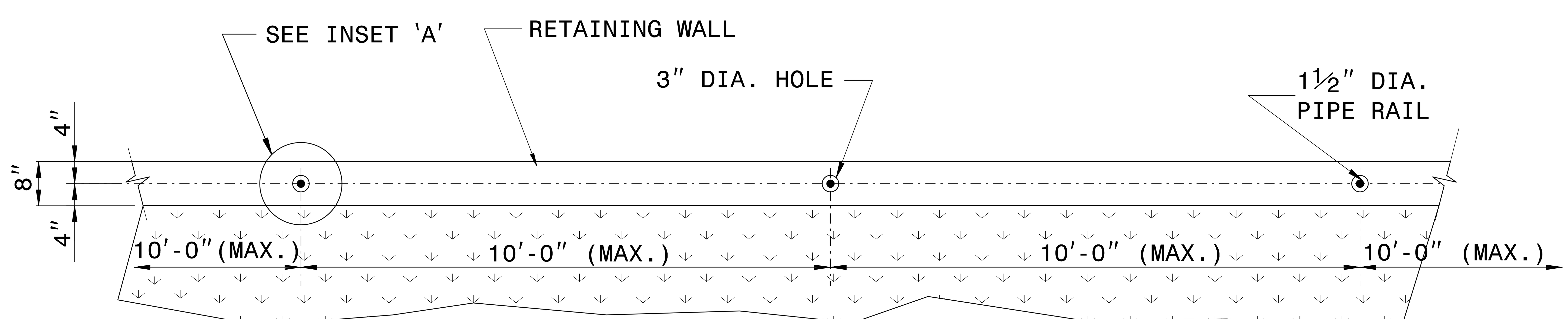
PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-2



ELEVATION OF HANDRAIL



INSET 'A'



PLAN VIEW

NOTES:

CONSTRUCT PROPOSED STEEL PIPE RAIL 1½" DIAMETER SCHEDULE 40 PLAIN END GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.

EMBED PIPE RAIL 8" INTO PROPOSED WALL WITH CHEMICAL OR CONCRETE GROUT ANCHORING SYSTEM AS DIRECTED BY THE ENGINEER.

REPAIR GALVANIZING IN ACCORDANCE WITH SECTION 1076 OF THE NCDOT STANDARD SPECIFICATIONS.

PAINT, IF REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH SECTION 1080 OF THE STANDARD SPECIFICATIONS.

CENTER THE PROPOSED RAILING ON TOP OF THE WALL WITH POST SPACING SYMMETRICAL ABOUT THE CENTER-LINE OF THE WALL.

USE A ROTARY DRILL IF NEEDED FOR EMBEDMENT HOLES OF RAIL IN WALL. ROTARY DRILL ONLY (NO ROTARY-IMPACT DRILLS).

WELD IN ACCORDANCE WITH ARTICLE 1072-18 OF THE STANDARD SPECIFICATIONS.

12/27/2024

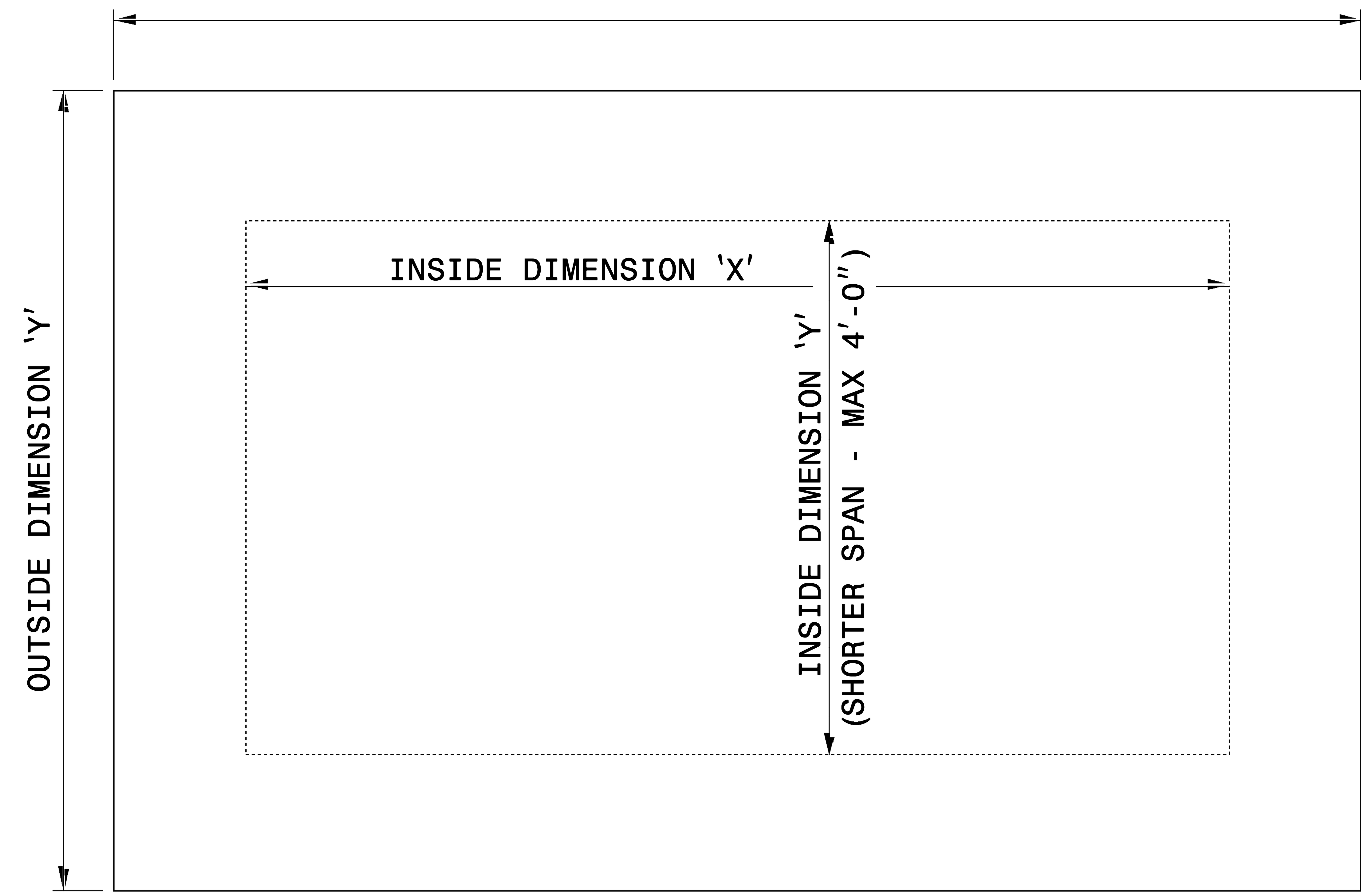
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

DETAIL OF PIPE HANDRAIL MOUNTED ON RETAINING WALL

ORIGINAL BY: E.E. WARD DATE: 12-99
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: jhowerton/handrail on retaining wall.dgn

$$$$$$SYSTIME$$$$$ $$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$

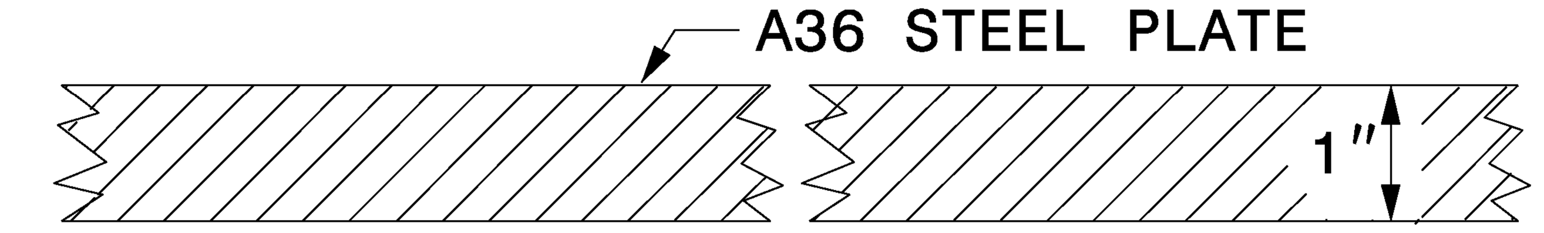
PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-3



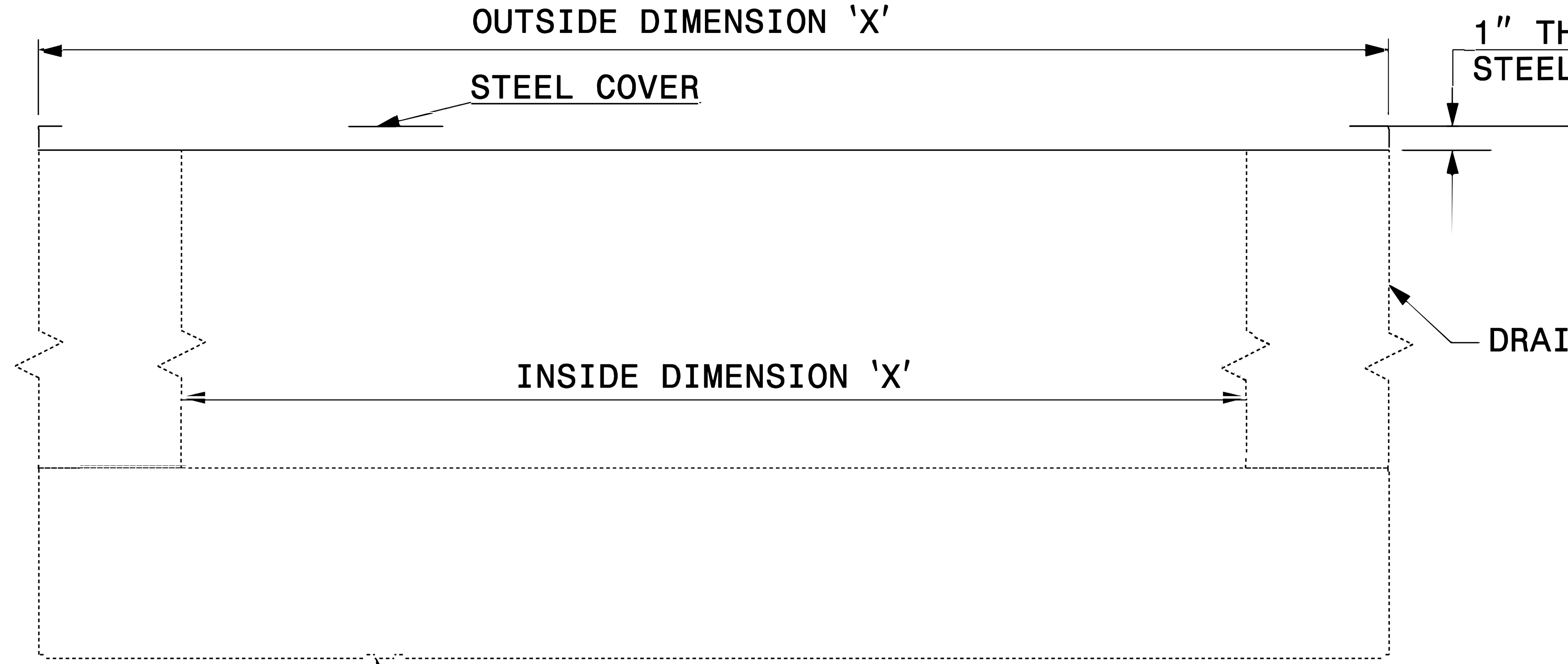
PLAN VIEWS

GENERAL NOTES:

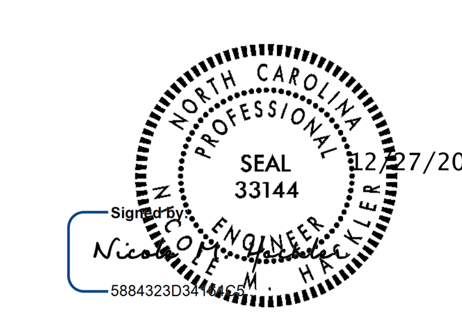
- -USE GRADE A36 STEEL
- -STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- -FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
- -SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
- -QUANTITES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.



SECTION VIEW OF STEEL TOP PLATE



ELEVATION VIEWS



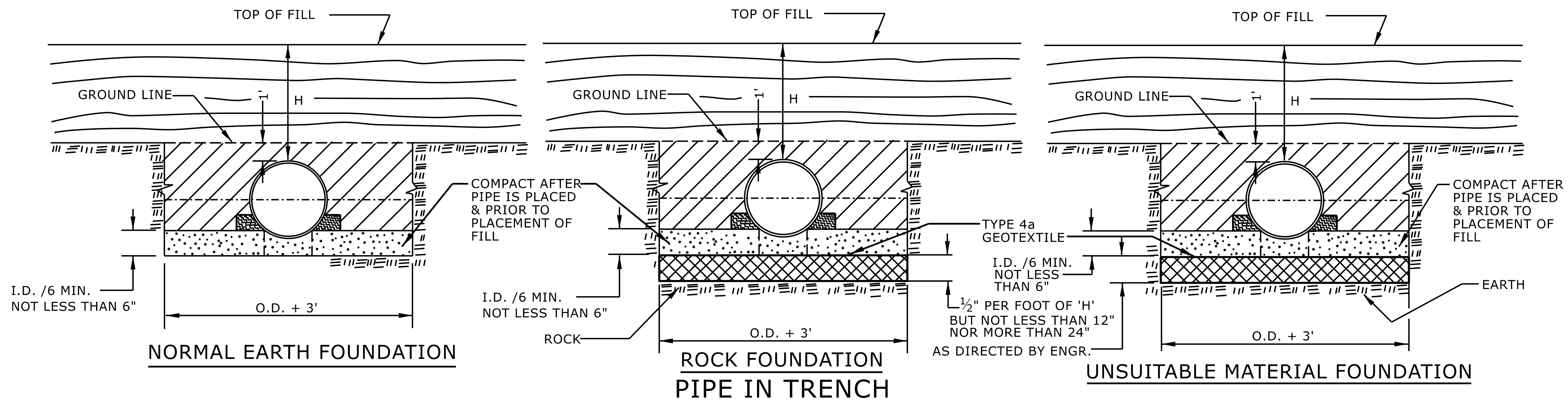
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

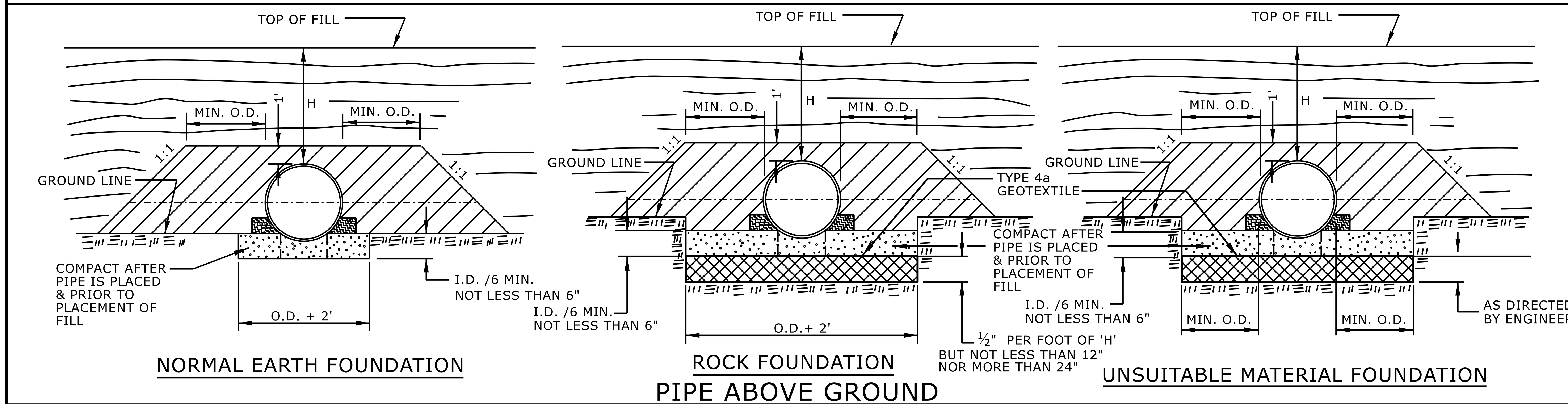
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE

ORIGINAL BY: E.E. WARD DATE: 2-2-98
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: eric:/usr/details/metric/stand/stlcvr2.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-4





GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 2

300.01

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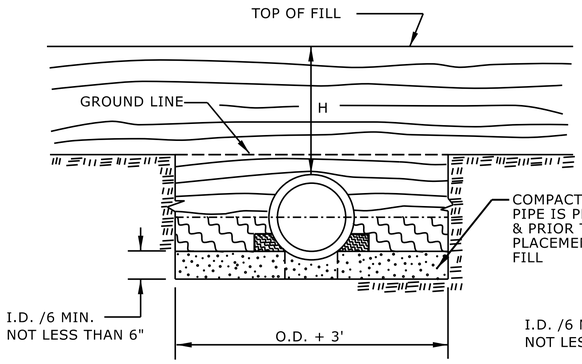
CONTRACTS STANDARDS AND DEVELOPMENT UNIT

Office 919-707-6950 FAX 919-250-4119

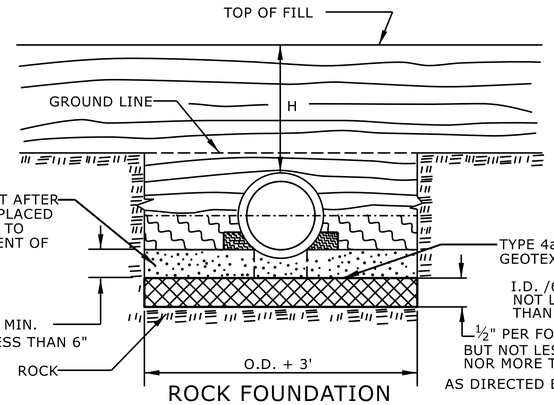
SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

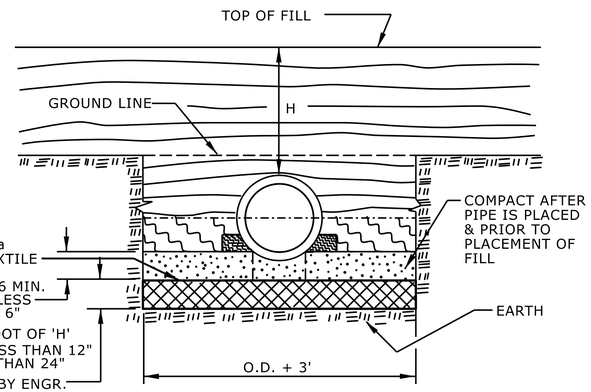
PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-5



NORMAL EARTH FOUNDATION

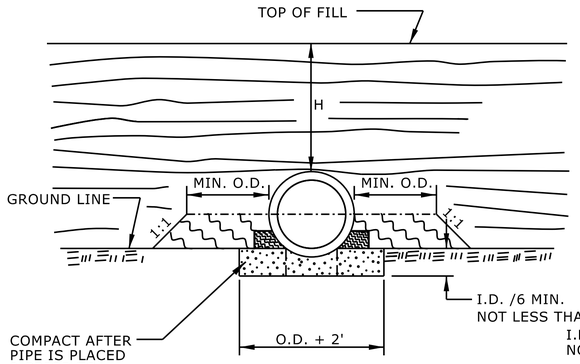


ROCK FOUNDATION

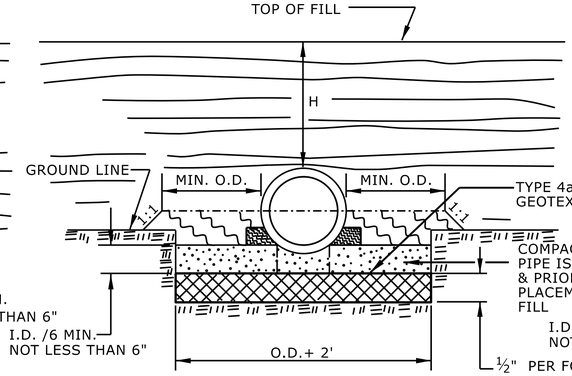


UNSUITABLE MATERIAL FOUNDATION

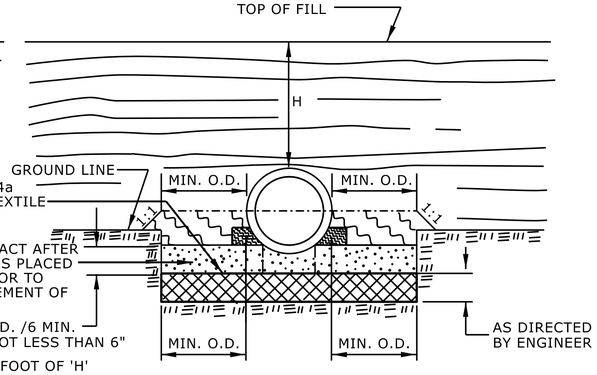
PIPE IN TRENCH



NORMAL EARTH FOUNDATION



ROCK FOUNDATION



UNSUITABLE MATERIAL FOUNDATION

PIPE ABOVE GROUND

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 2

300.01

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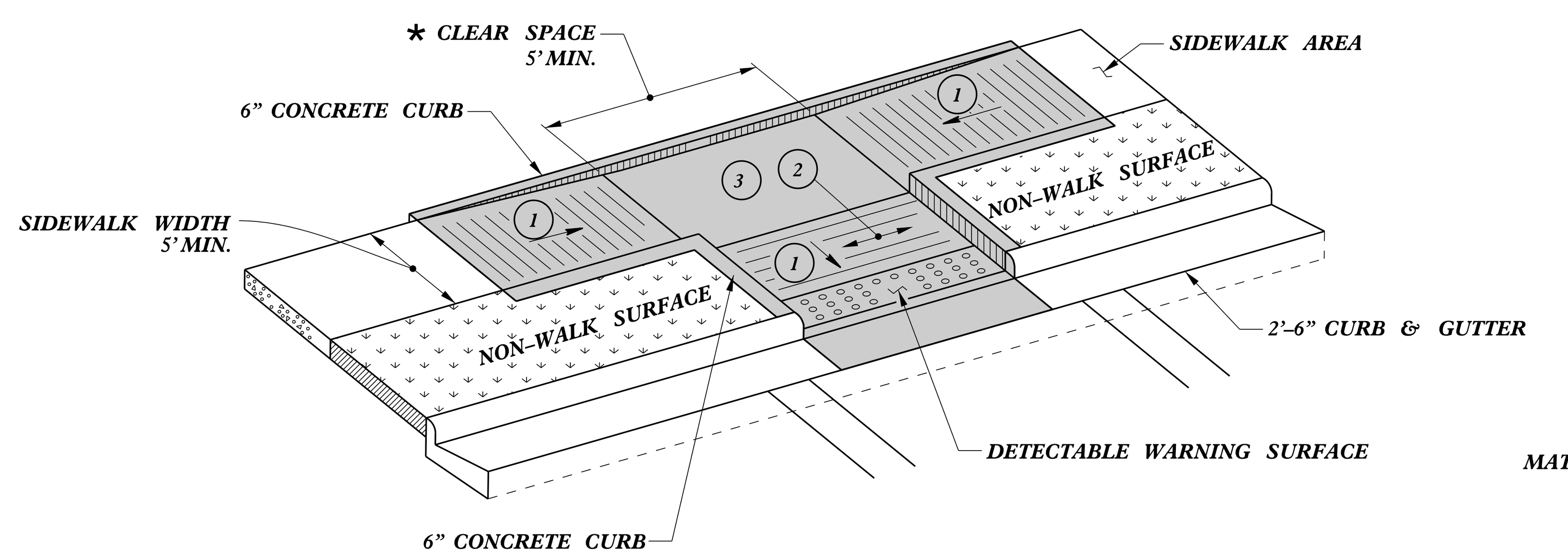
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

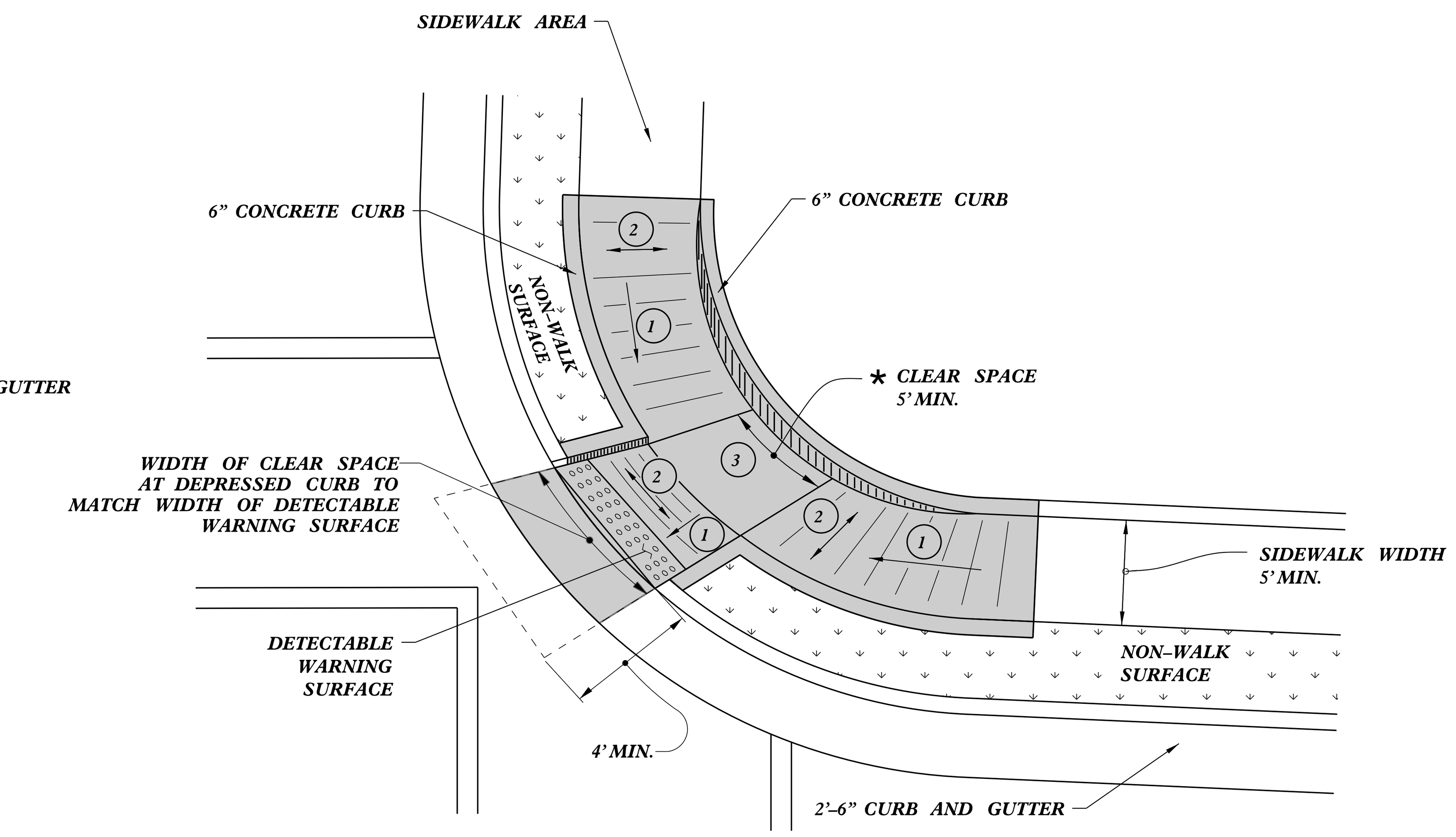
SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

* – WHERE CLEAR SPACE IS CONSTRAINED ON TWO OR MORE SIDES, THE CLEAR SPACE SHALL BE 4' MINIMUM X 5' MINIMUM, WITH 5' PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.



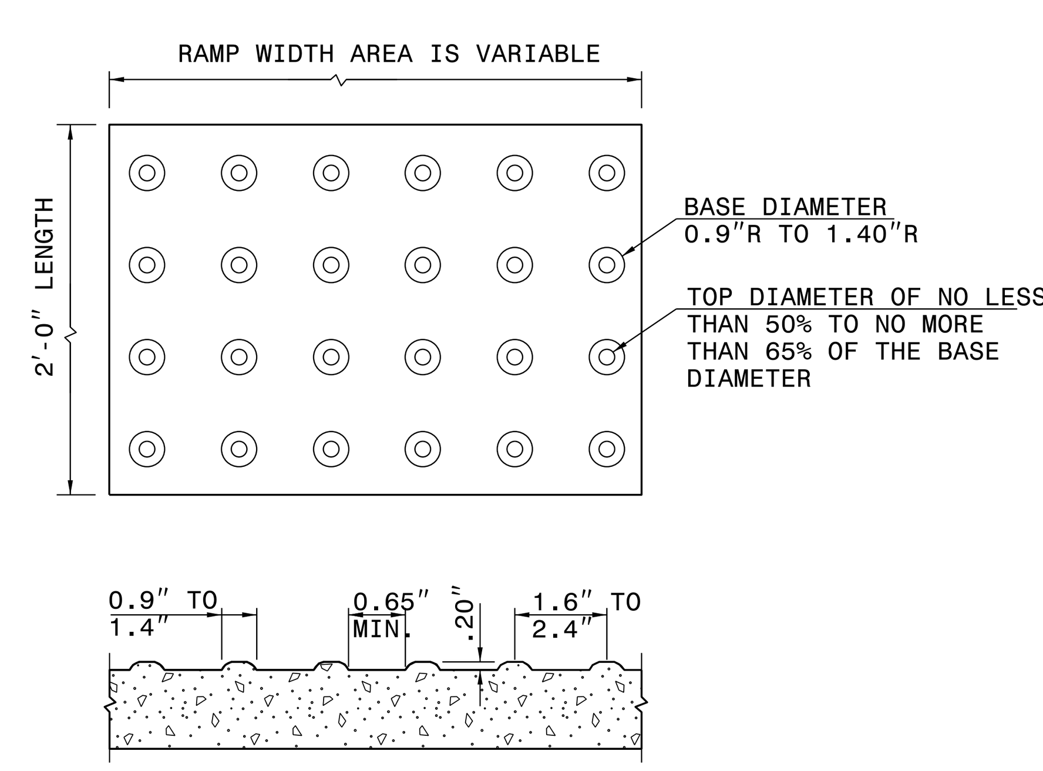
TYPE 3



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

(1) 8.33% (12:1) MAX RAMP SLOPE

(2) CROSS SLOPE: 2.00%

(3) MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

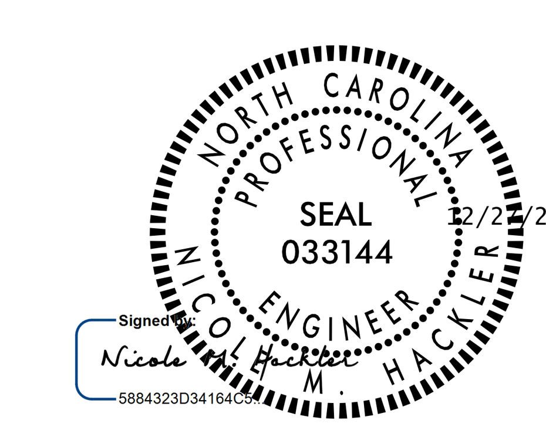
PAY LIMITS FOR 1 CURB RAMP

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CURB RAMP
PARALLEL RAMP

SHEET 9 OF 13

848D06



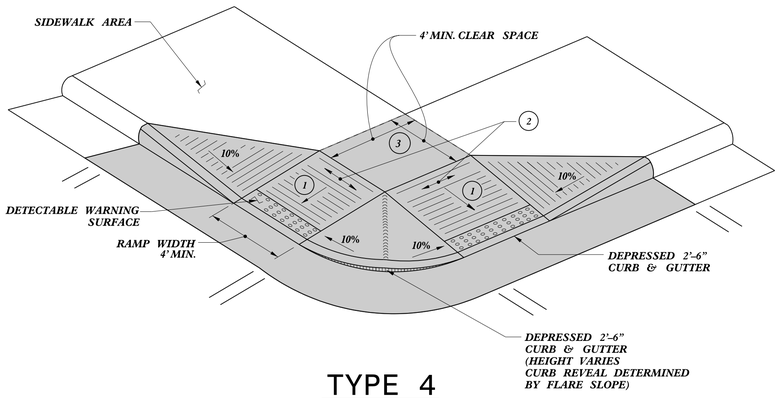
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

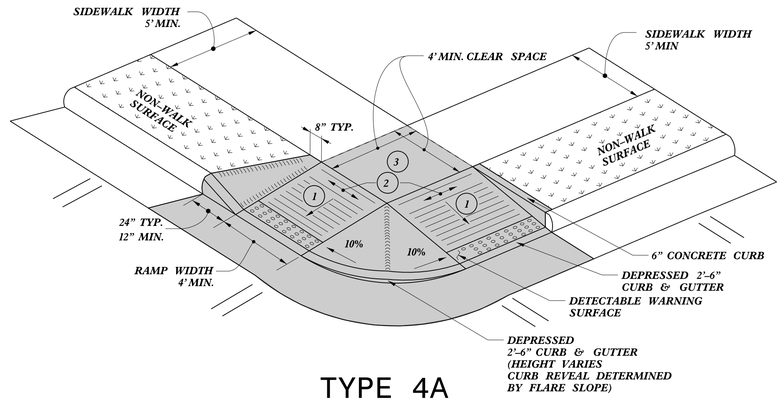
SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: special details\nmhackler\D0609.dgn

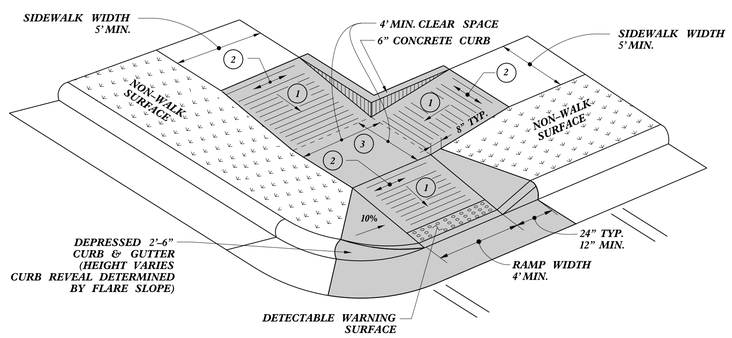
PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-7



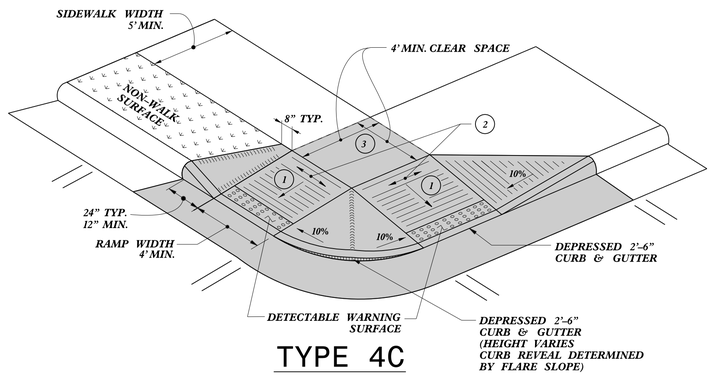
TYPE 4



TYPE 4A



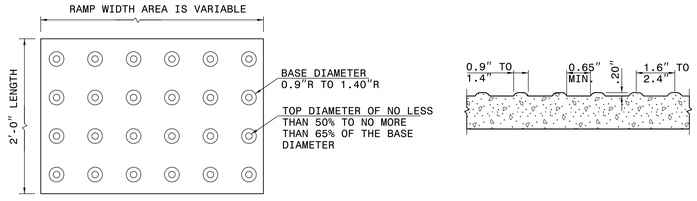
TYPE 4B



TYPE 4C

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

1. *8.33% (12:1) MAX RAMP SLOPE*
2. *CROSS SLOPE: 2.00%*
3. *MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.*

PAY LIMITS FOR 1 OR 2 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

CURB RAMP

SHARED LANDING

SHEET 10 OF 13

848D06

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: special details\nmhackler\848D0610.dgn

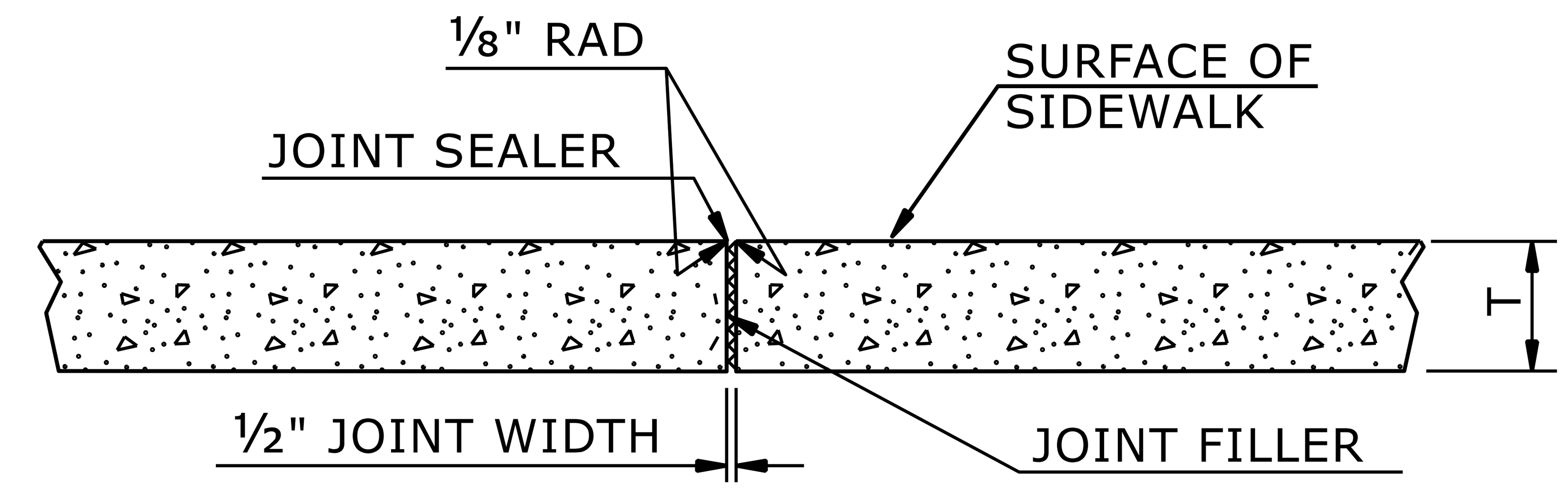
PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-8

NOTES:

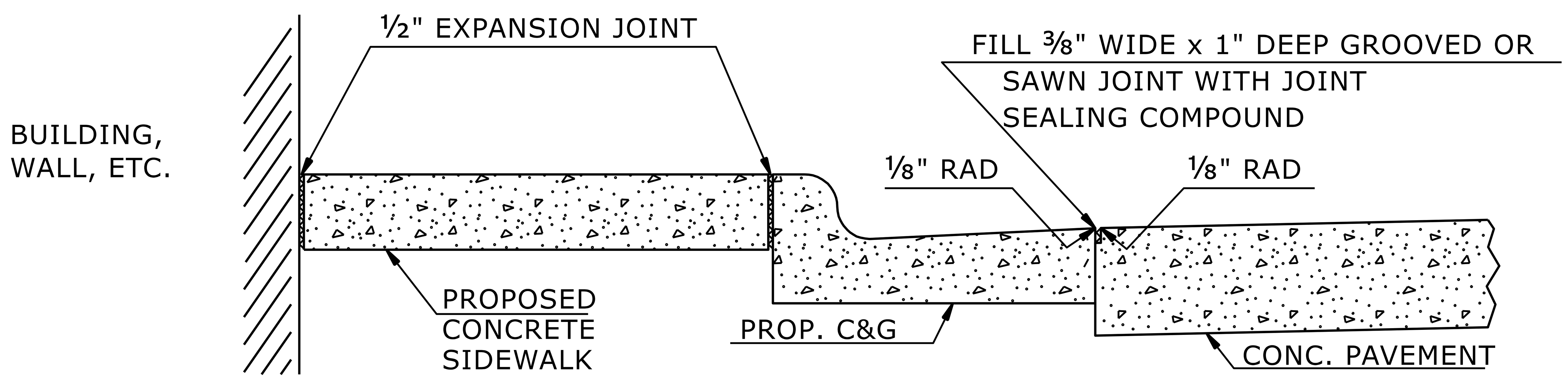
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT IN SIDEWALK

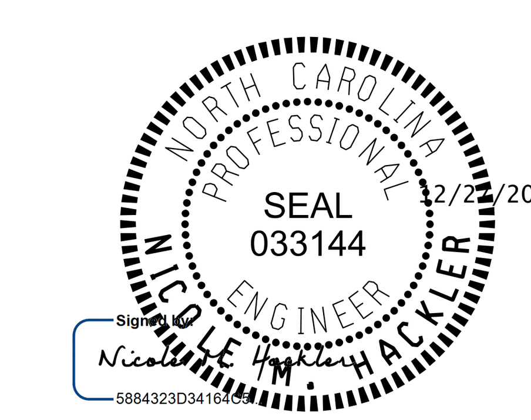


DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK

SHEET 1 OF 1
848D01



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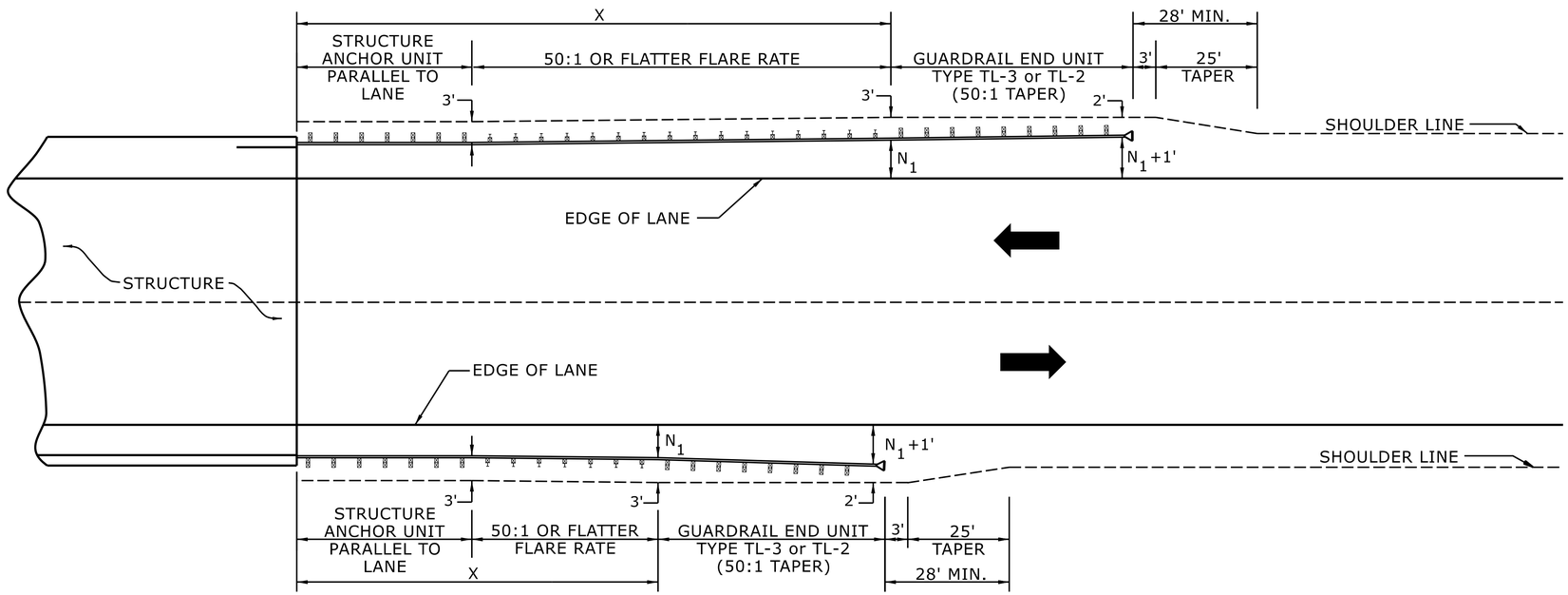
PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-9



USE FLARE RATE AS THE CONTROL IF THE "N_1" DISTANCE IS NOT OBTAINED.
("N_1" IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)

SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS

FOR POSTED SPEEDS ≥ 45MPH USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45MPH USE GREU TYPE TL-2

GUARDRAIL LENGTH OF NEED (X) IS CALCULATED BASED ON THE AASHTO ROADSIDE DESIGN GUIDE.

LENGTHS AND OFFSETS FOR PROPOSED GUARDRAIL AT TWO LANE - TWO WAY LOCATIONS

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE HACKLER
12/23/2024
Signature: Nicole Hackler
5884323034164C5...

SHEET 4 OF 15

862D01

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CONTRACTS STANDARDS
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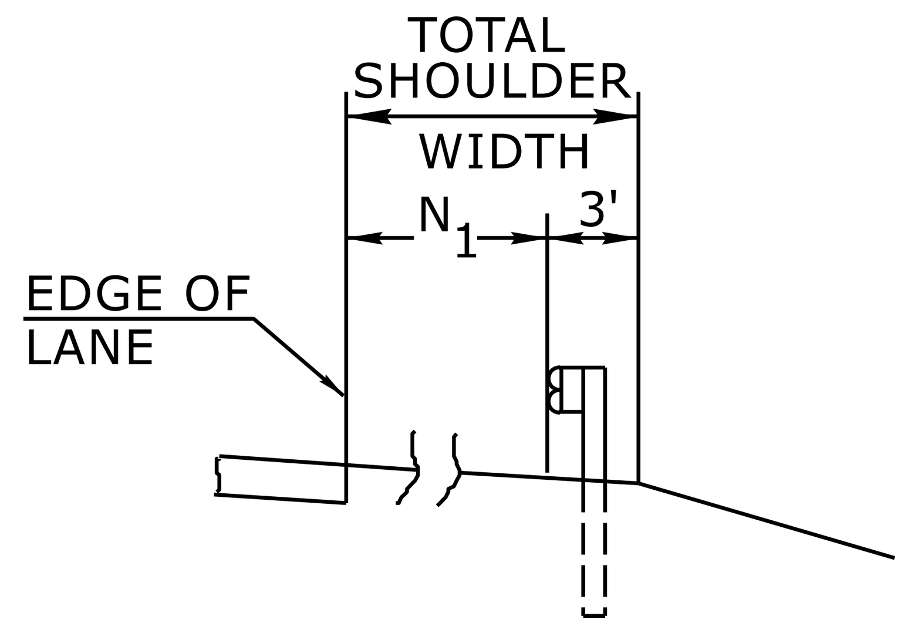
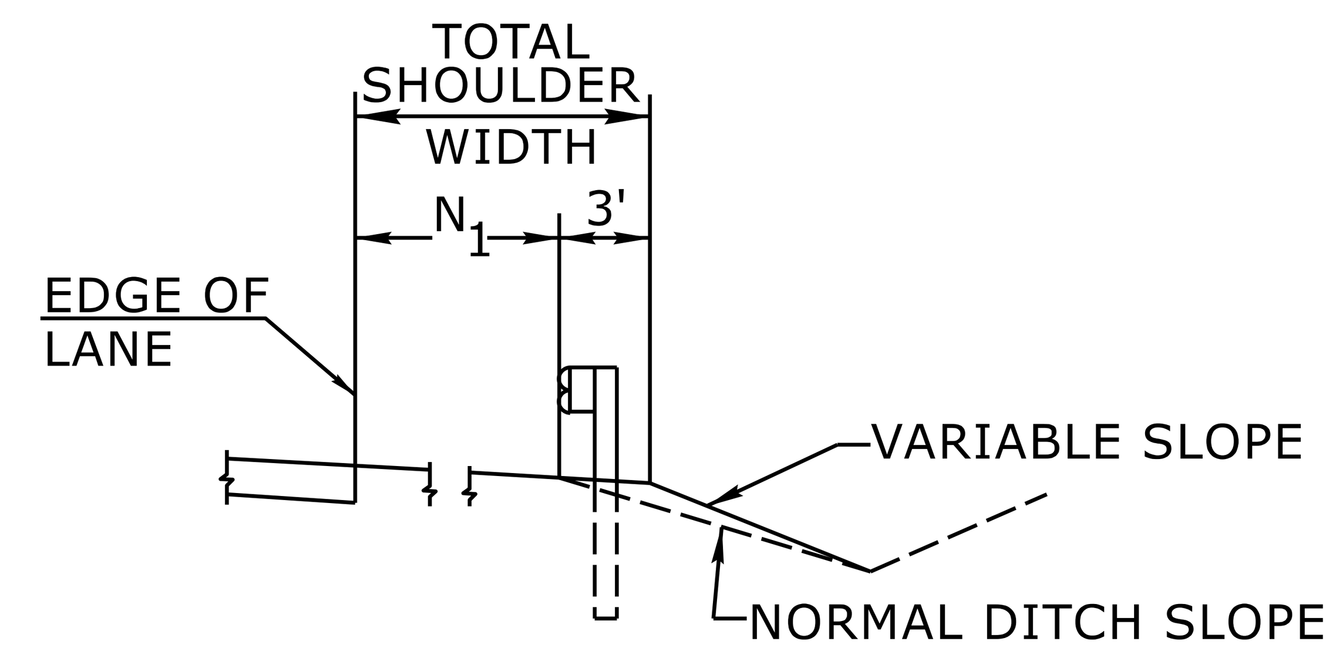
FILE SPEC.: _____

PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-10

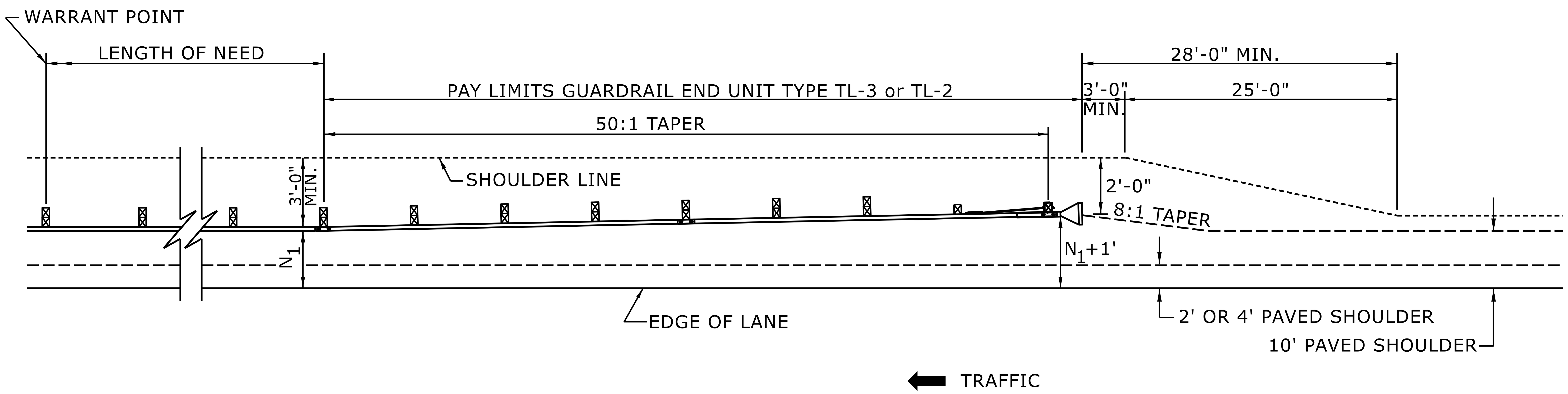


FILL SECTION



CUT SECTION

"N_1"= DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.



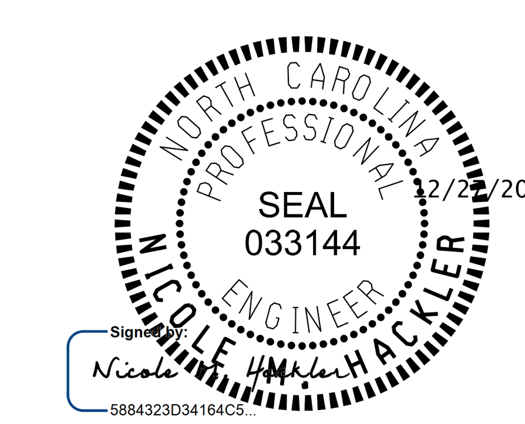
FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

SHEET 6 OF 15
862D01



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CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

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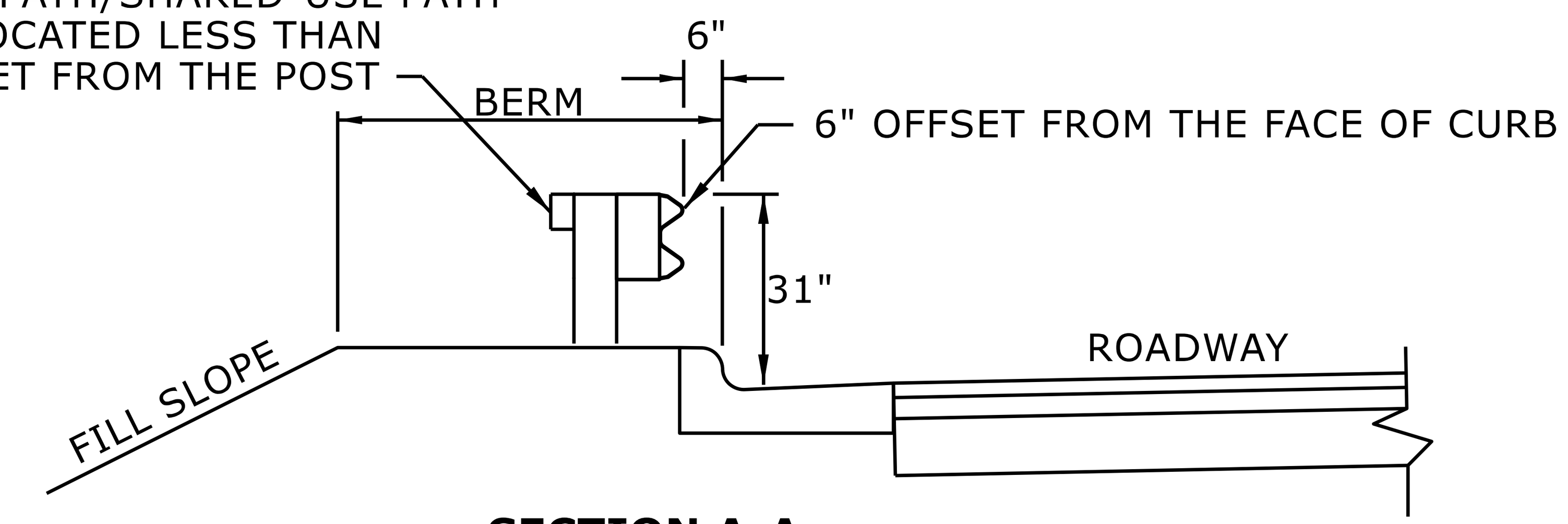
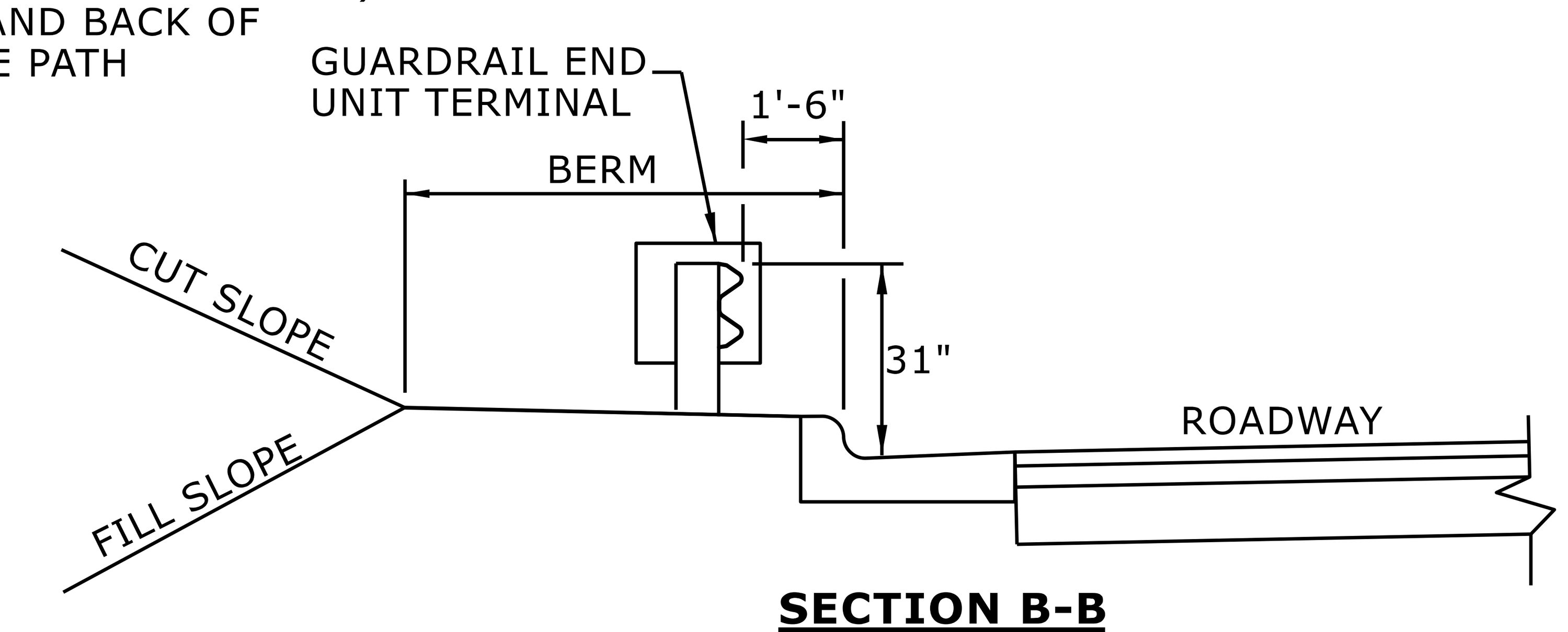
PROJECT REFERENCE NO.	SHEET NO.
U-6011	2C-11

PLACE APPROVED BICYCLE FRIENDLY RAILINGS, FENCE, OR RUB RAILS IF SIDEPATH/SHARED-USE PATH IS LOCATED LESS THAN 4 FEET FROM THE POST

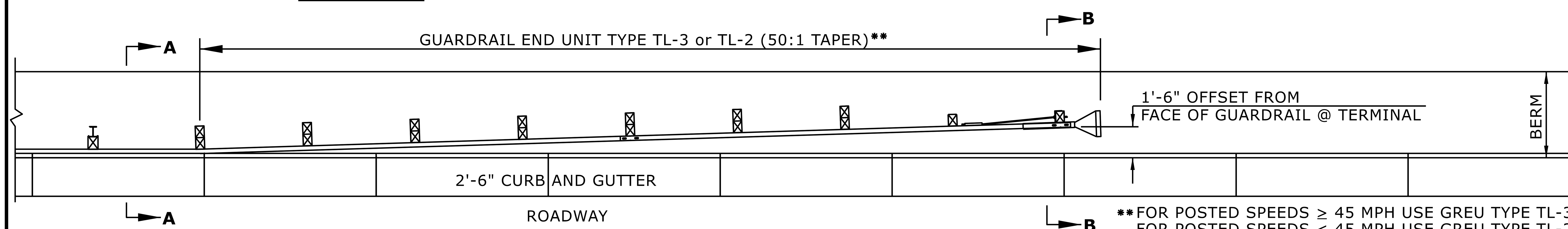
SEE THE ROADWAY DESIGN MANUAL (PART I CHAPTER 4 SECTION 4.14) FOR OFFSET DISTANCES FROM FACE OF GUARDRAIL AND BACK OF GUARDRAIL TO SIDEWALK OR SIDEPATH/SHARED-USE PATH



SECTION A-A



SECTION B-B



**FOR POSTED SPEEDS ≥ 45 MPH USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45 MPH USE GREU TYPE TL-2

BICYCLE FRIENDLY RAILINGS, FENCE OR RUB RAIL SHOULD NOT BE PLACED WITHIN THE LIMITS OF THE STRUCTURAL ANCHOR OR END UNITS

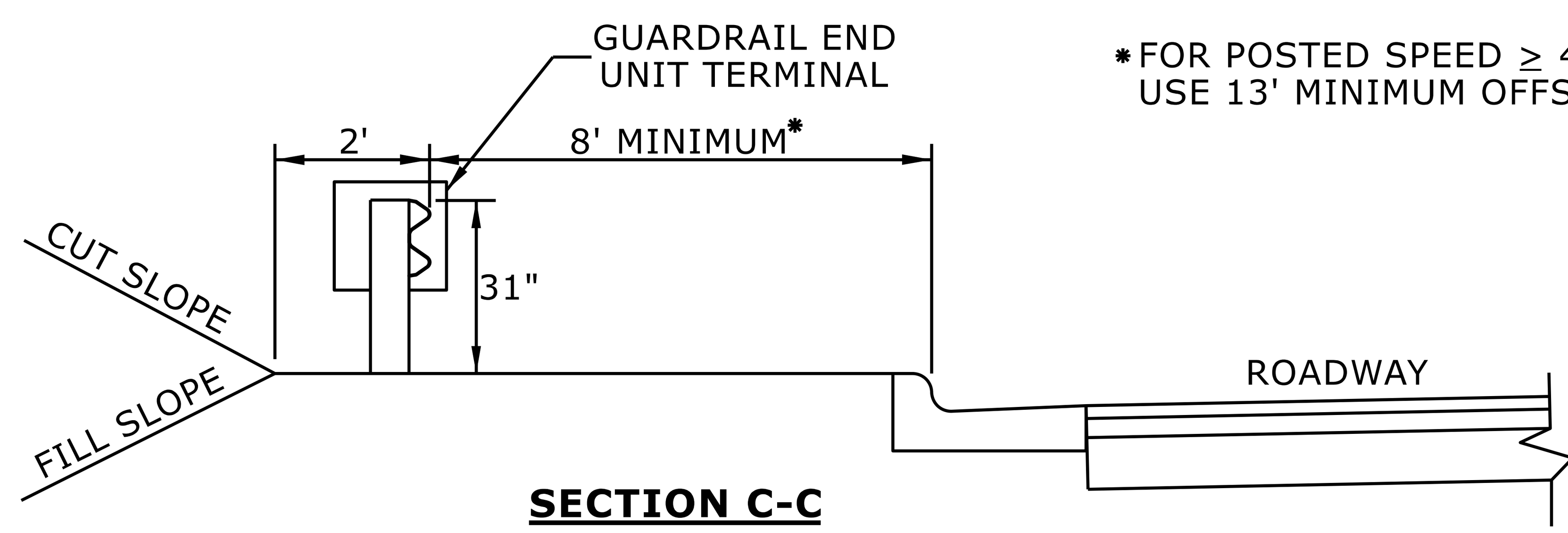
GUARDRAIL 6" FROM THE FACE OF CURB

*FOR POSTED SPEED ≥ 40 MPH USE 13' MINIMUM OFFSET

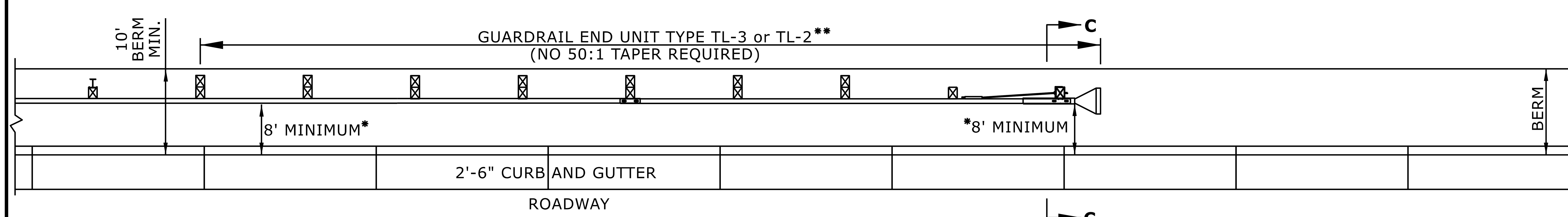
SEE THE ROADWAY DESIGN MANUAL (PART I CHAPTER 4 SECTION 4.14) FOR OFFSET DISTANCES FROM FACE OF GUARDRAIL AND BACK OF GUARDRAIL TO SIDEWALK OR SIDEPATH/SHARED-USE PATH

**FOR POSTED SPEEDS ≥ 45 MPH USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45 MPH USE GREU TYPE TL-2

BICYCLE FRIENDLY RAILINGS, FENCE OR RUB RAIL SHOULD NOT BE PLACED WITHIN THE LIMITS OF THE STRUCTURAL ANCHOR OR END UNITS



SECTION C-C



GUARDRAIL 8' OR GREATER OFFSET FROM FACE OF CURB

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT
GUARDRAIL TREATMENT AT CURB AND GUTTER

SHEET 12 OF 15
862D01

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE HACKLER 12/?/2024

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Office 919-707-6950 FAX 919-250-4119

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ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
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FILE SPEC.:

COMPUTED BY: DBG	DATE: 5-2023
CHECKED BY: DLW	DATE: 5-2023

5/28/99

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLANS PREPARED BY :
PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

PROJECT REFERENCE NO.	SHEET NO.
U-6011	3B-1

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV. Cubic Yards	UNDERCUT Cubic Yards	EMBANK. Cubic Yards	BORROW Cubic Yards	WASTE Cubic Yards
-L- 10+00.00	-L- 20+00.00	347		410	63	
-Y1- 15+36.90	-Y1- 19+37.03	172		264	92	
-Y1- 20+16.24	-Y1- 27+32.93	218		606	388	
SUBTOTALS:		737		1,280	543	
PROJECT TOTALS:		737		1,280	543	
WASTE IN LIEU OF BORROW						
PROJECT TOTAL		737		1,280	543	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					27	
GRAND TOTALS:		737		1,280	570	
SAY:		750			580	

NOTE: EARTHWORK QUANTITIES ARE CALCULATED BY ROADWAY DESIGNER. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Removal of Existing Asphalt Pavement, and Clearing and Grubbing will be paid for at the contract lump sum price for "Grading."

ASPHALT PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
-Y1-	22+84	23+13	RT	2.20
-Y1-	23+36	23+90	RT	47.50
-Y1-	24+11	24+41	LT	37.95
-Y1-	24+43	24+68	LT	18.69
			TOTAL:	106.34
			SAY:	110

W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350
"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS										IMPACT ATTENUATOR TYPE 350 TL-2			EXTRA LENGTH GUARDRAIL POSTS	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GREU TL-2	GREU TL-3	III	CAT-1	VI MOD	BIC	AT-1	TES	EA	G	NG				
-L-	10+23.99	12+05.24	RT	181.25			11+04.29		2.5	4	50		1					1		1											
-Y1-	16+74.50	18+05.75	RT	131.25			17+14.17		2.5	4	25		1				1			1								17			8' STEEL POSTS
TOTAL				312.50													1	1		2								17			
		DEDUCT FOR ANCHOR UNITS																													
		GRAU CAT-1 2 @ 6.25' =		-12.50																											
		GREU TL-2 1 @ 25' =		-25																											
		GREU TL-3 1 @ 50' =		-50																											
SAY				225			5 EA ADDITIONAL GUARDRAIL POSTS										1	1		2								17			

16-JAN-2025 12:02
J:\U-6011\Roadway\Proj\U-6011_RDY_SUM_3B-1.dgn
$$$$USERNAME$$$$

COMPUTED BY:	BNE	DATE:	01/14/2025
CHECKED BY:	JGD	DATE:	01/14/2025

PROJECT NO.	SHEET NO.
U-6011	3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

ABBREVIATIONS
- C.A.A. CORRUGATED ALUMINIUM ALLOY
- C.B. CATCH BASIN
- C.S. CORRUGATED STEEL
- D.I. DROP INLET
- G.D.I. GRATED DROP INLET
- H.D.P.E. HIGH DENSITY POLYETHYLENE
- J.B. JUNCTION BOX
- M.H. MANHOLE
- N.S. NARROW SLOT
- P.V.C. POLYVINYL CHLORIDE
- R.C. REINFORCED CONCRETE
- T.B.D.I. TRAFFIC BEARING DROP INLET
- T.B.J.B. TRAFFIC BEARING JUNCTION BOX
- W.S. WIDE SLOT

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET		STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	42 .109	48 .109	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	TEMP STEEL PLATE COVER MASONRY DRAINAGE		M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B.	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	ADJUST M.H.	MODIFIED CONC. FLUME		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
Y1 20+85	32	RT	0401		683.2																																												1			1			1																																	
			0401	0402		680.2	679.8																																	68																																				8															Temp. Steel Plates for Open Trench, See TMP Plans
Y1 20+78	36	LT	0402		684.4																																												1			1		1																																		
			0402	0403		679.8	679.6																																	48																																																				
Y1 20+37	65	LT	0403		682.4																																												1										1	1																													
			0403	0404		679.6	679.4																																	60																																																				
L 13+85	42	LT	0404		682.5																																												1			1		1																																		
			0404	0405		679.4	679.0																																	112																																																				
L 12+73	41	LT	0405		682.2																																												1			1	1																																			
			0405	0408		679.0	677.2																																	44																																																				
L 11+64	65	LT	0406		680.1																																												1										1	1																													
			0406	0407		677.9	677.8																																	28																																																				
L 11+64	37	LT	0407		682.5																																												1			1			1																																	
			0407	0408		677.4	677.2																																	64																																																				
L 12+28	40	LT	0408		682.3																																												1	0.1		1			1																																	
			0408	0409		677.2	676.9	0.6																																	16																																																		Remove Existing CB and +/- 16 LF of 18" RCP
L 12+28	24	LT	0409		676.9																																																																						2													0.4465		Temp. Steel Plates for Open Trench, See TMP Plans
L 12+27	34	RT	0410		682.7																																																																															1						See Calc. Sheet for Additional MH Adj.
L 12+73	44	RT	0411		682.2																																												1			1	1																																			
			0411	0412		679.1	678.7																																	56																																																					
L 12+16	44	RT	0412		682.3																																												1	1.4		1		1																																		
			0412	0413		675.9	675.6	0.9																																	12																																																			
L 12+06	53	RT	0413		681.5																																												1	0.7									1	1																													
L 16+12	42	LT	0416		682.9																																												1			1			1																																	
			0416	0418		679.9	676.7																																	140																																																					
L 17+68	67	LT	0417		680.4																																												1			1	1																																			
			0417	0418		676.9	676.7	0.9																																28																																																				
L 17+54	43	LT	0418		680.8																																												1			1			1																																	
			0418	0419		676.4	675.5	0.6																																	108																																																			
L 18+63	40	LT	0419		678.8																																												1			1			1																																	
			0419	0420		675.5	673.4	0.7																																	72																																																		Remove +/- 74 LF of Existing 15" RCP
L 18+81	33	RT	0420		678.0																																												1			1		1																			9															Temp. Steel Plates for Open Trench, See TMP Plans
			0420	0421		673.4	671.0	0.8																															40																																																		Remove Existing CB and +/- 40 LF of 18" RCP
L 19+23	34	RT	0421		677.1	671.0																																											1	1.1		1		1																																		
Y1 18+00	38	LT	0422		680.8																																												1			1		1																																		
			0422	0423		677.8	676.2																																	96																																																					
Y1 16+97	38	LT	0423		679.2																																												1			1		1																																		
			0423	0424		676.2	673.7																																	148																																																					
Y1 15+40	35	LT	0424		676.7	673.2																																											1			1		1																																		
L 16+99	33	RT	0425		681.8																																												1			1		1																																		
			0425	0426		677.5	677.4																																4																																																						
L 16+98	35	RT	0426		677.5																																																																																					0.3528		Remove Existing CB
L 12+08	51	RT																																																																																							6	Remove Existing DI
L 12+10	40	RT																																																																																							12	Remove Existing CB
L 12+14	45	RT																																																																																							8	
L 12+09	66	LT																																																																																							40	
L 12+19	41	RT																																																																																							20	
L 13+19	47	LT																																																																																							179	
L 14+10	48	LT																																																																																							21	
								SHEET TOTALS																															4	892	248									21	3.3		18	3	9	6				3	3													19									1				0.7993	286	

SDG-BELAM

COMPUTED BY: BNE	DATE: 01/14/2025
CHECKED BY: JGD	DATE: 01/14/2025

PROJECT NO.	SHEET NO.
U-6011	3D-2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
L 18+15	53 LT																			
Y1 16+62	35 RT																			
Y1 20+32	53 LT																			
Y1 20+67	6 RT																			
SHEET TOTALS																				
PROJECT TOTALS																				

LINE & STATION	C. S. PIPE 12 (.064)	15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
L 18+15																								
Y1 16+62																								
Y1 20+32																								
Y1 20+67																								
SHEET TOTALS																								
PROJECT TOTALS																	4	892	248					

LINE & STATION	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28
L 18+15																		
Y1 16+62																		
Y1 20+32																		
Y1 20+67																		
SHEET TOTALS																		
PROJECT TOTALS				21	3.3		18	3	9	6				3	3			

LINE & STATION	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	TEMP STEEL PLATE COVER MASONRY DRAINAGE		M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B.	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	ADJUST M.H.	MODIFIED CONC. FLUME		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 18+15																							98	
Y1 16+62																							21	
Y1 20+32																							68	
Y1 20+67																					3			
SHEET TOTALS																					3		187	
PROJECT TOTALS									19									1			3	0.7993	473	

ABBREVIATIONS

- C.A.A. CORRUGATED ALUMINIUM ALLOY
- C.B. CATCH BASIN
- C.S. CORRUGATED STEEL
- D.I. DROP INLET
- G.D.I. GRATED DROP INLET
- H.D.P.E. HIGH DENSITY POLYETHYLENE
- J.B. JUNCTION BOX
- M.H. MANHOLE
- N.S. NARROW SLOT
- P.V.C. POLYVINYL CHLORIDE
- R.C. REINFORCED CONCRETE
- T.B.D.I. TRAFFIC BEARING DROP INLET
- T.B.J.B. TRAFFIC BEARING JUNCTION BOX
- W.S. WIDE SLOT

PLANS PREPARED BY :
PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	PLAN SHEET No.	PROPERTY OWNER NAME
1	4 & 5	KOURY NST LLC
2	4 & 5	RBS INVESTMENTS LLC
3	4	WHJB PROPERTIES LLC
4	4	CHURCH STREET COMMONS REALTY LLC
5	4	NOT USED
6	4	ANT SAVINGS CORP
7	4	LOWES HOME CENTERS LLC
8	4	DIFRANCO INVESTMENTS LLC ETAL
9	4	SW BURLINGTON LLC
10	5	KOURY NST LLC
11	5	RAMIRO CAMPOS

PARCEL No.	PLAN SHEET No.	PROPERTY OWNER NAME

PROJECT REFERENCE NO.	SHEET NO.
U-6011	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PLANS PREPARED BY :
PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243 FAX (919) 859-6258
ENG FIRM LICENSE NO. C-890

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028387 AYMAN I. ALOUDWAN — DocuSigned by: Ayman Aloudwan 2/10/2025

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 026971 JOSHUA G. DALTON — Signed by: Josh Dalton 2/10/2025

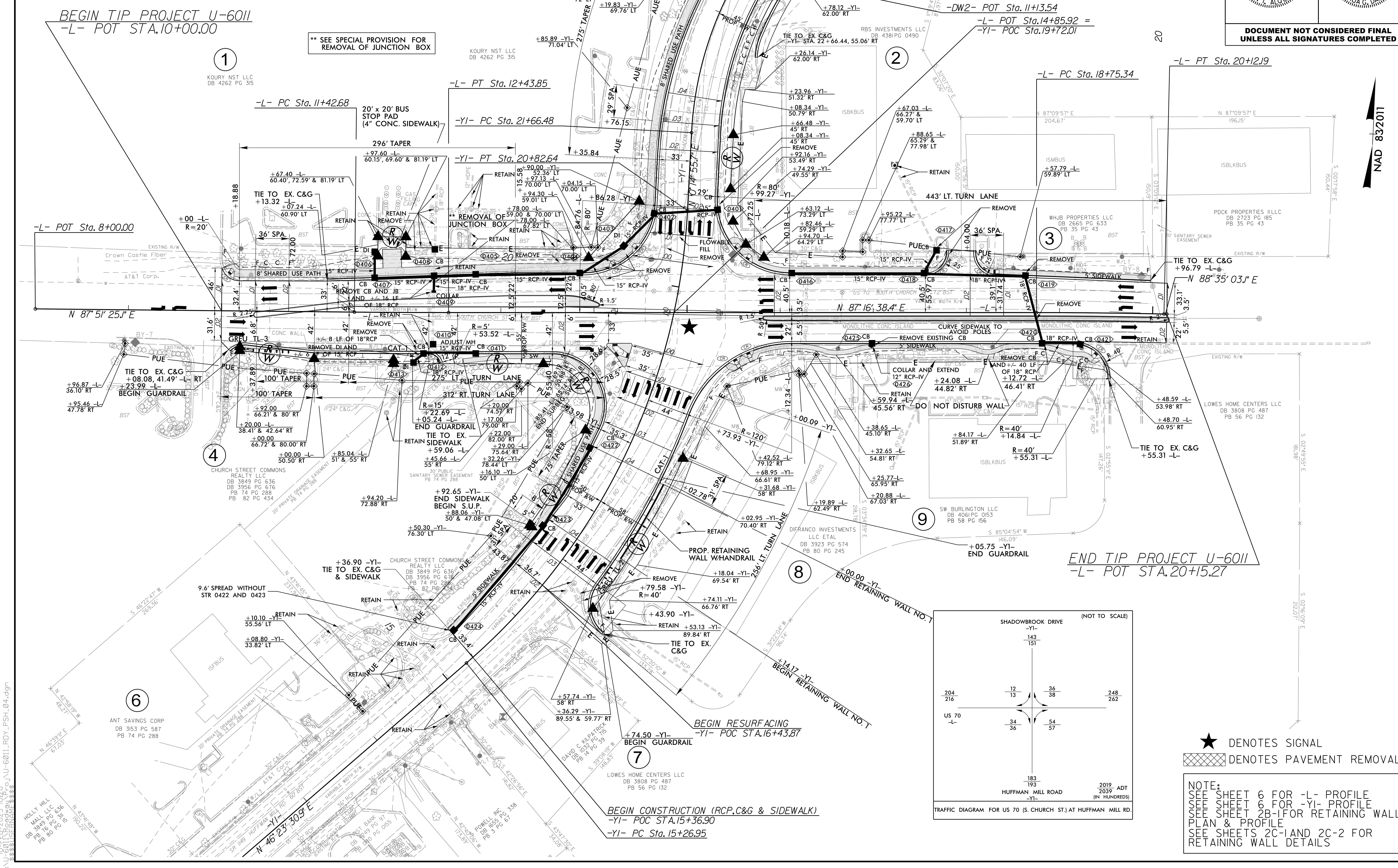
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-L-
PI Sta 11+93.26
Δ = 0° 34' 46.7" (LT)
D = 0° 34' 22.6"
L = 101.17'
T = 50.58'
R = 10,000.00'

-L-
PI Sta 19+43.77
Δ = 1° 18' 24.7" (RT)
D = 0° 57' 17.7"
L = 136.86'
T = 68.43'
R = 6,000.00'

-Y1-
PI Sta 18+20.85
Δ = 46° 08' 35.1" (LT)
D = 8° 18' 13.5"
L = 555.69'
T = 293.91'
R = 690.00'
R.O. = 124.00'
SE = .04
DS = 40 MPH

-Y1-
PI Sta 23+21.52
Δ = 44° 55' 30.8" (RT)
D = 15° 16' 43.9"
L = 294.03'
T = 155.04'
R = 375.00'
R.O. = 116.00'
SE = .04
DS = 35 MPH



TRAFFIC DIAGRAM FOR US 70 (S. CHURCH ST.) AT HUFFMAN MILL RD.

★ DENOTES SIGNAL
DENOTES PAVEMENT REMOVAL

NOTE:
SEE SHEET 6 FOR -L- PROFILE
SEE SHEET 6 FOR -Y1- PROFILE
SEE SHEET 2B-1 FOR RETAINING WALL PLAN & PROFILE
SEE SHEETS 2C-1 AND 2C-2 FOR RETAINING WALL DETAILS

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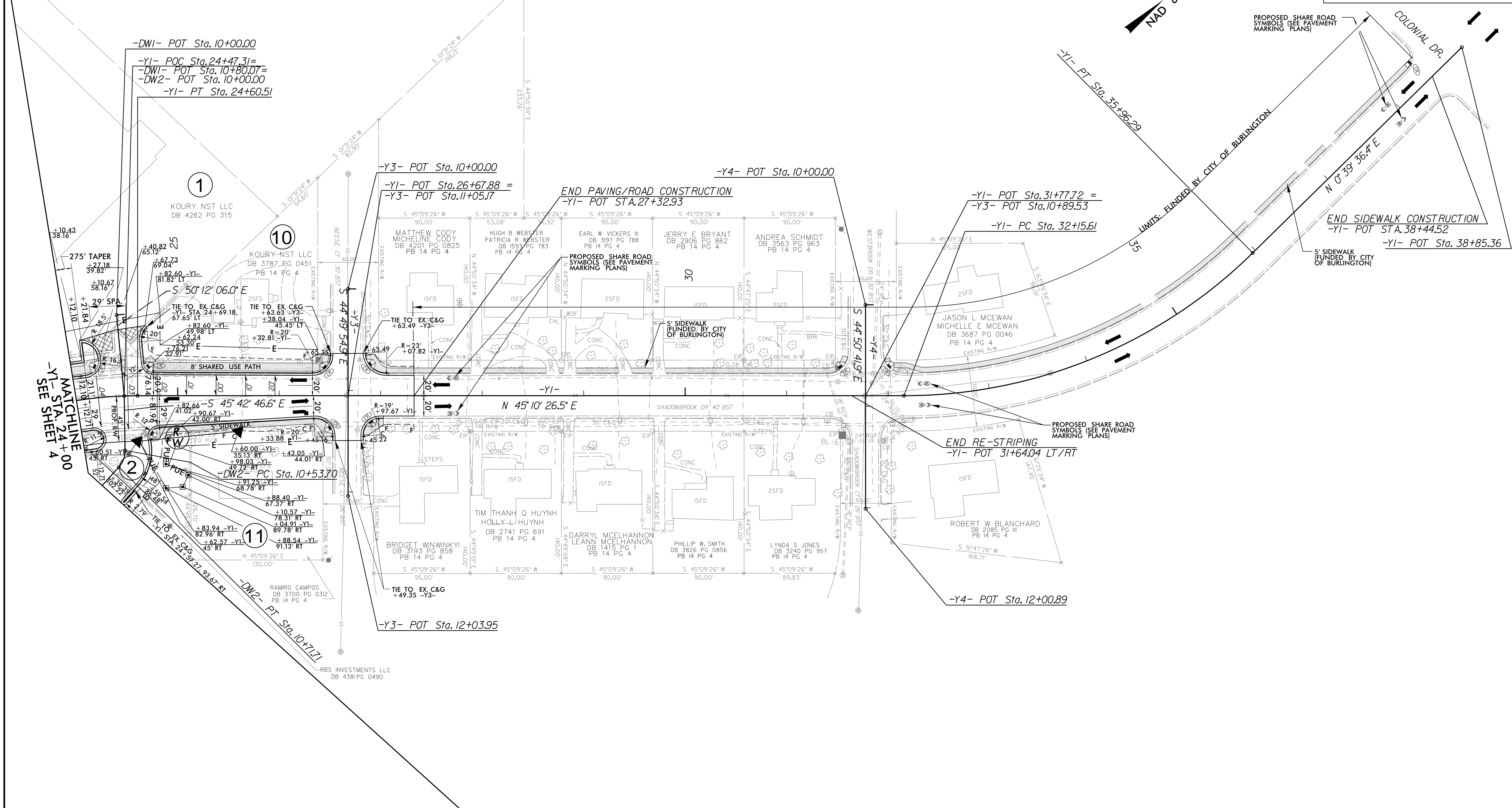
PROJECT REFERENCE NO.	SHEET NO.
U-6011	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SEAL 028387 12/27/2024	SEAL 026971 12/27/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-DW2-
PI Sta 10+63.15
△ = 42° 59' 41.8" (RT)
D = 238° 43' 56.7"
L = 18.01'
T = 9.45'
R = 24.00'

-Y1-
PI Sta 34+16.14
△ = 44° 30' 50.1" (LT)
D = 11° 41' 34.9"
L = 380.69'
T = 200.53'
R = 490.00'


NAD 83 2011
-DW1- POT Sta. 10+00.00
-Y1- POC Sta. 24+47.31 =
-DW1- POT Sta. 10+80.07 =
-DW2- POT Sta. 10+00.00
-Y1- PT Sta. 24+60.51
-Y3- POT Sta. 10+00.00
-Y1- POT Sta. 26+67.88 =
-Y3- POT Sta. 11+05.17
END PAVING/ROAD CONSTRUCTION
-Y1- POT STA. 27+32.93
-Y4- POT Sta. 10+00.00
-Y1- POT Sta. 31+77.72 =
-Y3- POT Sta. 10+89.53
-Y1- PC Sta. 32+15.61
-Y1- PT Sta. 35+96.29
LIMITS: FUNDED BY CITY OF BURLINGTON
END SIDEWALK CONSTRUCTION
-Y1- POT STA. 38+44.52
-Y1- POT Sta. 38+85.36
PROPOSED SHARE ROAD SYMBOLS (SEE PAVEMENT MARKING PLANS)
5' SIDEWALK (FUNDED BY CITY OF BURLINGTON)
COLONIAL DR.
N 0° 39' 36.4" E
END RE-STRIPING
-Y1- POT 31+64.04 LT/RT
-Y4- POT Sta. 12+00.89
-Y3- POT Sta. 12+03.95
-DW2- PC Sta. 10+53.70
-DW2- PT Sta. 10+71.71
MATCHLINE -Y1- STA. 24+00 SEE SHEET 4
8' SHARED USE PATH
5' SIDEWALK
N 45° 10' 26.5" E
S 45° 42' 46.6" E
S 50° 12' 06.0" E
S 44° 49' 54.9" E
S 44° 50' 41.9" E
SHADOWBROOK DR
WESTBROOK DR
NEESE CT
275' TAPER
29' SPA
KOURY NST LLC DB 4262 PG 315
KOURY NST LLC DB 3787 PG 0451 PB 14 PG 4
MATTHEW CODY MICHELINE CODY DB 4201 PG 0825 PB 14 PG 4
HUGH B WEBSTER PATRICIA R WEBSTER DB 1593 PG 783 PB 14 PG 4
EARL W VICKERS III DB 3197 PG 788 PB 14 PG 4
JERRY E BRYANT DB 2906 PG 862 PB 14 PG 4
ANDREA SCHMIDT DB 3563 PG 963 PB 14 PG 4
JASON L MCEWAN MICHELLE E MCEWAN DB 3687 PG 0046 PB 14 PG 4
BRIDGET WINWINKYI DB 3193 PG 858 PB 14 PG 4
TIM THANH Q HUYNH HOLLY L HUYNH DB 2741 PG 691 PB 14 PG 4
DARRYL MCELHANNON LEANN MCELHANNON DB 1415 PG 1 PB 14 PG 4
PHILLIP W. SMITH DB 3826 PG 0856 PB 14 PG 4
LYNDA S JONES DB 3240 PG 957 PB 14 PG 4
ROBERT W BLANCHARD DB 2085 PG 111 PB 14 PG 4
RAMIRO CAMPOS DB 3700 PG 0312 PB 14 PG 4
RBS INVESTMENTS LLC DB 4381 PG 0490

DENOTES PAVEMENT REMOVAL

NOTE:
SEE SHEET 6 FOR -Y1- PROFILE
SEE SHEET 7 FOR -Y3- PROFILE

26-DEC-2024
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PROJECT REFERENCE NO.	SHEET NO.
U-6011	6

PLANS PREPARED BY :
PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

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ENG FIRM LICENSE NO. C-890

ROADWAY DESIGN ENGINEER — SEAL 028387 — 12/27/2024

HYDRAULICS ENGINEER — SEAL 026971 — 12/27/2024

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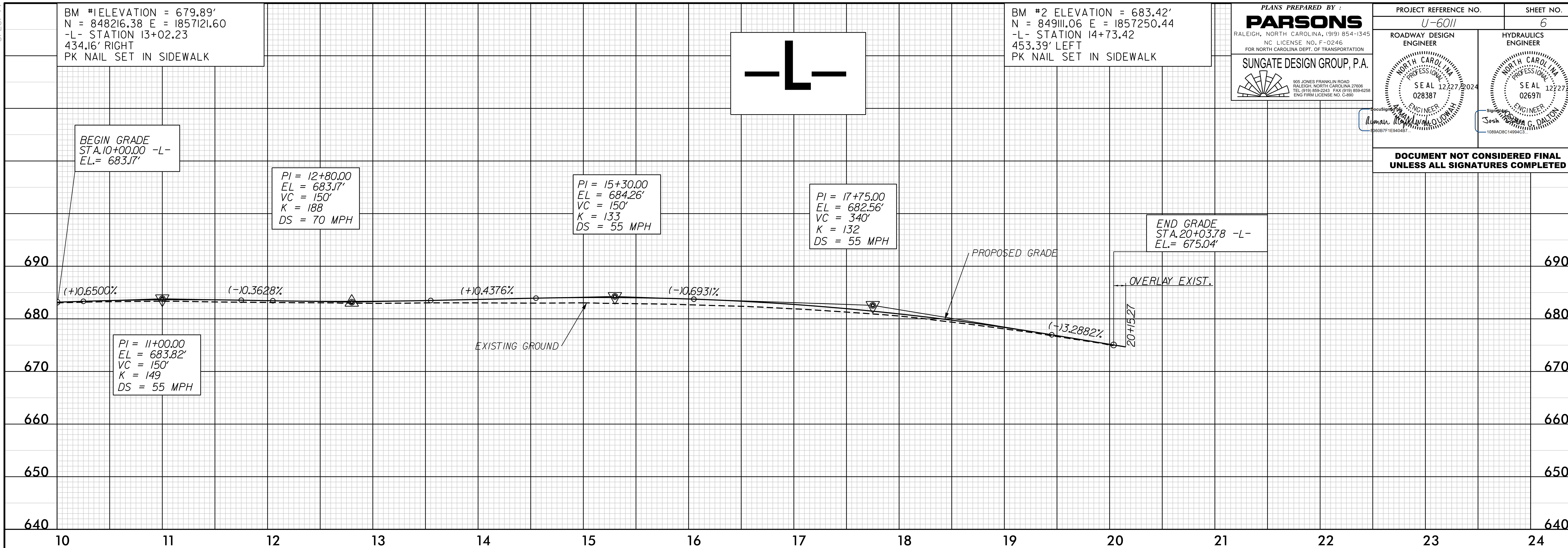
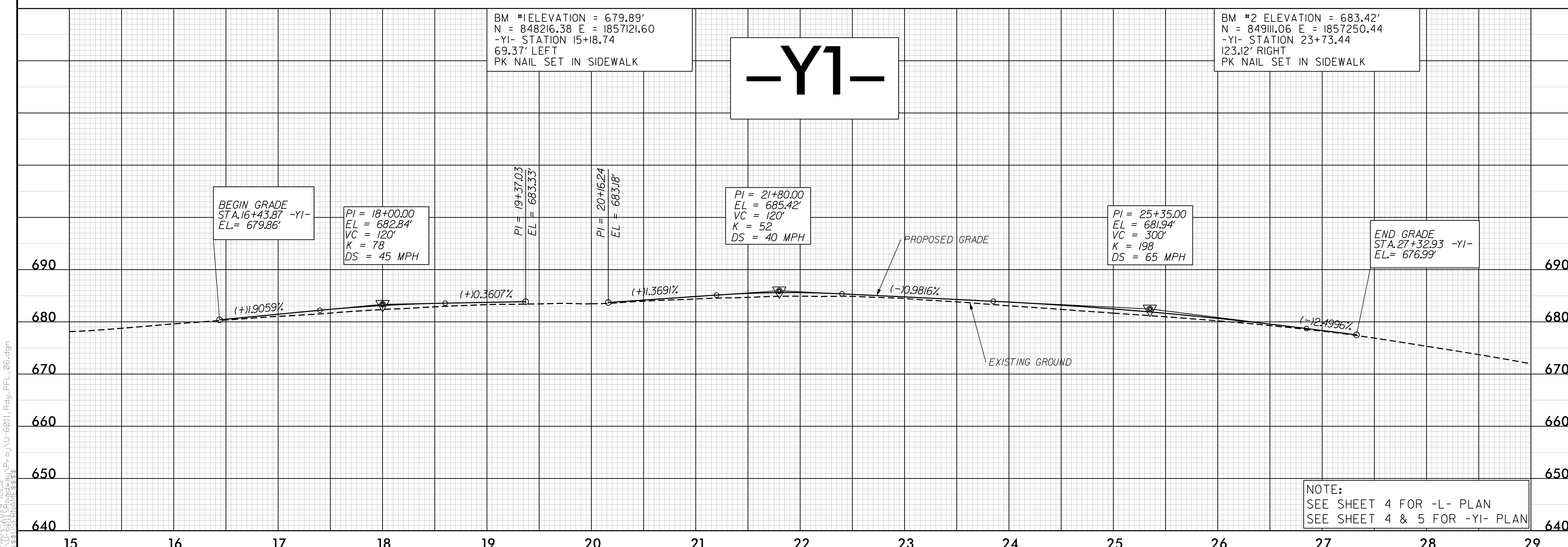


BM #1 ELEVATION = 679.89'
N = 848216.38 E = 1857121.60
-L- STATION 13+02.23
434.16' RIGHT
PK NAIL SET IN SIDEWALK
-L-
BM #2 ELEVATION = 683.42'
N = 849111.06 E = 1857250.44
-L- STATION 14+73.42
453.39' LEFT
PK NAIL SET IN SIDEWALK
BEGIN GRADE STA.10+00.00 -L- EL.= 683.17'
PI = 12+80.00 EL = 683.17' VC = 150' K = 188 DS = 70 MPH
PI = 15+30.00 EL = 684.26' VC = 150' K = 133 DS = 55 MPH
PI = 17+75.00 EL = 682.56' VC = 340' K = 132 DS = 55 MPH
END GRADE STA.20+03.78 -L- EL.= 675.04'
PROPOSED GRADE
OVERLAY EXIST.
(+)0.6500%
(-)0.3628%
(+)0.4376%
(-)0.6931%
(-)3.2882%
20+15.27
EXISTING GROUND
PI = 11+00.00 EL = 683.82' VC = 150' K = 149 DS = 55 MPH
690
680
670
660
650
640
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24



BM #1 ELEVATION = 679.89'
N = 848216.38 E = 1857121.60
-Y1- STATION 15+18.74
69.37' LEFT
PK NAIL SET IN SIDEWALK
-Y1-
BM #2 ELEVATION = 683.42'
N = 849111.06 E = 1857250.44
-Y1- STATION 23+73.44
123.12' RIGHT
PK NAIL SET IN SIDEWALK
BEGIN GRADE STA.16+43.87 -Y1- EL.= 679.86'
PI = 18+00.00 EL = 682.84' VC = 120' K = 78 DS = 45 MPH
PI = 19+37.03 EL = 683.33'
PI = 20+16.24 EL = 683.18'
PI = 21+80.00 EL = 685.42' VC = 120' K = 52 DS = 40 MPH
PROPOSED GRADE
PI = 25+35.00 EL = 681.94' VC = 300' K = 198 DS = 65 MPH
END GRADE STA.27+32.93 -Y1- EL.= 676.99'
(+)1.9059%
(+)0.3607%
(+)1.3691%
(-)0.9816%
(-)2.4996%
EXISTING GROUND
690
680
670
660
650
640
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29

NOTE:
SEE SHEET 4 FOR -L- PLAN
SEE SHEET 4 & 5 FOR -Y1- PLAN

-Y3-

PLANS PREPARED BY :
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PROJECT REFERENCE NO.	SHEET NO.
U-6011	7

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SEAL 028387 12/27/2024	SEAL 026971 12/27/2024

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NOTE:
SEE SHEET 5 FOR -Y3- PLAN